

Report of Accomplishments for FY 01

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Summary of Impacts

Sufficient evidence exists to credit the Oregon State University Extension Service with the following impacts during 2001:

- Twenty-five Extension Agriculture programs produced \$50 million of economic benefit.
- The OSU Industrial Assessment Center saved Oregon industry \$25 million.
- Every **\$1 invested** in Oregon's nutrition education program reduced future health care costs by **\$3.63.**
- Over 5,700 adult volunteers gave more than \$15 million worth of their time to help more than 62,300 4-H members develop life skills that will help them succeed as they become adults.
- 2,783 Master Gardeners volunteered 132,303 hours (66 FTEs) in providing educational services to Oregonians worth an estimated \$1.96 million.
- 204 Master Food Preservers volunteered 11,200 hours in making 45,700 educational contacts related to **food safety and quality**.
- 160 Master Recyclers made 8,045 educational contacts related to waste reduction and recycling.
- The Extension Sea Grant pilot Groundfish Disaster Outreach Program expanded to \$1.75 million in disaster relief to provide transition retraining for 161 individuals and families.
- **Eighty four percent** of the fifth grade participants in the Tillamook County After School Science Program **met the Oregon Science Benchmarks** compared to 58% for the school district as a whole.
- Twenty-four Extension Agriculture Programs were given the highest index for their **positive environmental impacts.**

PLANNED PROGRAMS

Goal 1: An agricultural system that is highly competitive in the global economy.

Overview

The Oregon State University College of Agricultural Sciences has developed *Oregon Invests!: The Accountability Database* at http://oregoninvests.css.orst.edu/index.html. The database contains detailed reports of 367 research and Extension projects and programs, most of which are integrated and multidisciplinary. Each project is evaluated for its economic, environmental, and social impacts. An explanation of the interpretation of economic evaluation is given at

http://oregoninvests.css.orst.edu/htmls/info_profile.html including a PDF file "The Philosophy and Economic Methodology behind the Descriptions of Potential Consequences of Research Projects and Extension Programs."

The current economic impact of the 367 projects and programs is \$185,909,000 per year. One hundred one Extension programs are included in the database.

Impact: Twenty-five of these programs are producing \$50,025,000 of economic impact per year. For details of these projects visit

http://oregoninvests.css.orst.edu/index.html and click in succession: Search the Database – Profile Search – Economic – View Economic Consequences to Oregon Agriculture – Limit to Extension Programs. Clicking on a project title will produce a PDF file detailing the project.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Multistate Integrated Research and Extension WA, ID, MT, NV, WY, CA

Key Theme: **Agricultural Profitability**

Stopping Soil Erosion and Improving Economic Returns in Oregon's Dryland

Cropping Systems – Impact: \$3 million

Treasure Valley Pest Alert Network - Impact: \$2 million

Finding Optimum White Wheat Variety Combinations – Impact: \$1.5 million

Integrated Pest Management for Hazelnuts – Impact: \$1.4 million

Oregon Seed Certification Service – Impact: \$1.2 million

Extension Project in Oregon's Vegetable Crops – Impact: \$1 million

Cranberry Extension Program – Impact: \$1 Million

Research/Extension Program on Onions and Potatoes in the Treasure Valley –

Impact: \$1 million

Integrated Fruit Production – Impact: \$800,000

Crop Profitability Analysis Microcomputer Program – Impact: \$700,000

Key Theme: Animal Production Efficiency

Feedlot Trials – Impact: \$1 million

Timely Weaning of Beef Calves – Impact: \$1 million

Klamath Basin Neonatal Calf Mortality Project – Impact: \$1 million

Business Management for Oregon Dairies – Impact: \$700,000

Improving Economic Efficiency by Optimizing Beef Cattle Winter Feeding –

Impact: \$600,000

Key Theme: **Diversified/Alternative Agriculture**

IR-4 Field Trials for Minor Crops – Impact: \$10 million

Key Theme: **Grazing**

Sound Forage/Livestock Systems on Oregon's Grazing lands – Impact: \$2 million

Key Theme: Niche Market

Producing Onions for Dehydration – Impact: \$1.8 million

Key Theme: **Plant Health**

OSU Foundation Potato Seed Program – Impact: \$5.6 million

Oregon Plant Diagnostic Clinic – Impact: \$3 million

Key Theme: Plant Production Efficiency

Statewide Grass seed Production Activity – Impact: \$3 million

Statewide Mint Production Activity –Impact: \$2 million

Key Theme: Rangeland/ Pasture Management

The Extension Livestock Program at Warm Springs – Impact: \$750,000

Key Theme: **Risk Management**

Pacific Northwest Risk Management Education Project – Impact: \$1 million Safety Education in Oregon Food, Fiber, and Marine Industries – Impact: \$1

million

Key Theme: Urban Gardening

Oregon Master Gardener Program

Home gardening enthusiasts throughout the state can always get a friendly answer to their gardening questions thanks to the Extension Master Gardener program. In FY 01, the state's 2,783 active Master Gardeners shared their expertise with 256,019 contacts in 26 of Oregon's 36 counties, making it the most popular program in the OSU Extension Service. Key dimensions of the Master Gardener program include: Community

Stewardship and Civic Outreach, Protecting and Enhancing the Environment, Youth Programs, and General Horticulture. Educational methods used include: a phone staff for answering horticulture related questions; questions and answer clinics; demonstration gardens; and gardening classes, seminars, workshops, and lectures.

Impact: Graduate Master Gardeners volunteered 132,303 hours (66 FTEs) to teach new classes, providing services to Oregonians worth an estimated \$1.96 million in FY 01.

Key Theme: Small Farm Viability

Mid-Columbia Small Farms & Acreage Program

Extension educators from Oregon State University and Washington State University are cooperating in the delivery of 1) regional educational workshops, clinics, and conferences, 2) a regional bimonthly newsletter, and 3) a small-farm web site. All three provide research-based information to help small-acreage farmers improve management of their operations.

Outcome: Online at http://extension.orst.edu/wasco/smallfarms/listings.html

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Multistate, WA

Key Theme: Diversified/Alternative Agriculture

Enhancing Farm Income Through Renewable Energy Generation

Wheat growers in the Columbia Valley are looking closely at wind-generated electrical power as a way to enhance farm incomes. The additional income is needed to provide more stability to the area's agriculture-based economy and may help stabilize the farm population in the area. Farmers/landowners who choose to enter contracts with developers to establish long-term land leases for siting wind turbines could enjoy additional monthly income of \$1,000-2,000 for each tower on their land.

Outcomes: 130 people participated in a *Wind Power Leasing* workshop. Extension worked with the Regional Economic Development Council to expedite the permit process of a 25-megawatt project in Sherman County.

Impact: Two 25-megawatt wind power projects are being constructed in Sherman County (50 towers), which will provide landowners with an additional \$900,000 per year of income. A 60-80-tower project in planned for Gilliam County, with more being planned for Wasco County.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Multistate, WA

Goal 2: A safe and secure food and fiber system.

Overview:

Food safety/preservation programs in FY 01 included Master Food Preservers, the food safety/preservation hotline, county food safety programming, abuela (food safety education) program for Hispanics, and Fight Bac food safety education. Programming was conducted in counties with the Nutrition Education Program (NEP) of OSU Extension (funded through OFNP and EFNEP) as well as in counties not supported by NEP funds. Extension Sea Grant conducted food safety programs for fishers and sea food processors.

Key Theme: Food Safety

Food preservation hotline offers answers "just in time"

Oregonians can call a toll-free hotline to get "just- in-time" answers to their food preservation and safety questions. Lane County Master Food Preservers and Family and Community Development staff operate the hotline from mid-July to mid-October.

Outcome - In 2001 the hotline received 7,862 calls from nearly all Oregon counties. Fifty four percent of the calls had safety implications while forty six percent had quality implications. Over 1,400 publications were mailed to callers.

Outcome - 204 Master Food Preserver volunteers in 12 counties donated 11,200 hours. They made over 45,700 contacts through phone calls (including the statewide hotline), workshops/demonstrations, exhibits/booths at fairs, festivals, and farmers' markets, and pressure gauge testing.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – State Specific

Abuela Project

The Washington State University's abuela (food safety education) continued in the Marion/Polk/Yamhill/Multnomah Counties area. Hispanics (volunteers and OFNP staff) were trained to teach Hispanics to make queso fresco safely by using heat-treated or pasteurized milk.

Outcomes: The program reached 155 Hispanics including staff and volunteers of the Independence Migrant Head Start program. Cheese making demonstrations were part of the Oregon Fiesta Weekend event in Salem. A cheese-making workshop in Lane County reached 25 Hispanic adults, including two who have a cheese making business and are now using pasteurized milk for their product.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Multistate Extension WA

Teaching seafood processors to cope with new regulations

OSU Extension Sea Grant seafood specialists led the way to help seafood processors comply with new and complex FDA regulations for processing safe seafood. ESG has written and shared model processing plans online at http://seagrant.orst.edu/sgpubs/onlinepubs.html#haccp for common Pacific Northwest seafood products from shrimp and oysters to smoked fish. Seafood processors can now

use the model plans as guidelines for creating their own processing plans.

Outcome – Nearly 2,400 seafood processors and others download seafood publications off the website each month

Outcome – The ESG specialist responds to an average of 10 inquires each month from seafood processors and industry leaders regarding problem solving to help them comply with food safety regulations.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Multistate Integrated Research and Extension WA, CA, AK

Goal 3: A healthy, well-nourished population.

Key Theme: **Human Health**

Overview

Diet, nutrition and health continued to be a cornerstone of Family and Community Development programming in 2001. Programming was conducted in 11 counties with the Nutrition Education Program (NEP) of OSU Extension (funded through OFNP and EFNEP) as well as in 9 counties that are not supported by NEP funds.

Nutrition Education Program

Program Goals:

NEP participants improve their nutrition knowledge, choose foods more wisely, plan and prepare healthy meals and handle food safely. Participants are more food secure: they are less likely to run out of food by the end of the month and they are linked to community resources to help their food needs. In Multnomah County, a Hispanic (satellite) office in a Northeast Portland limited income apartment complex integrates nutrition education into the daily lives of residents. An Extension educator located on-site at a CAFS office in District 2 integrates nutrition education into that office's TANF services. Youth taught food safety skills bring what they learned home to their families. Volunteers are trained to deliver nutrition information and key food safety messages. Bilingual NEP educators are located in four counties.

Participants in programs not supported by NEP funds learned about healthy food choices and how to plan, buy, and prepare healthful food at reasonable cost. Programming focused on a variety of health issues including osteoporosis risk reduction, exercise habits, management of chronic disease (including Type 2 diabetes, stroke, and heart disease), and herbal remedies.

Audiences:

NEP audiences included teen parents, pregnant teens, at-risk youth, the working poor, food bank/pantry users, families with young children, single parent families, individuals/couples without children, older adults, childcare/day care providers, welfare-to-work participants.

Over 100 partnerships/collaborations support NEP programs such as, but not limited to: WIC; Head Start; Child, Adult and Family Services; schools; subsidized housing; food banks and pantries; Indian Health Service; Indian Tribal organizations; transitional housing; Portland Police Bureau; Health departments; and churches.

Outcomes:

- Direct program contacts included 2,766 adults and 4,514 youths
- 660 volunteers were trained
- Volunteer contacts included 2,465 adults and 115 youths

- 5,542 family members received information from program participants
- 11,000 people received nutrition information from displays, exhibits, demonstrations, newsletter, inserts in emergency food bags, and a kiosk
- 90,000 families and individuals were reached through trained volunteers
- A comprehensive report of learner outcomes is available upon request

Impact: A cost benefit study was conducted during 2001. For every \$1 invested in Oregon's nutrition education program, \$3.63 in future health care costs is estimated to be avoided as a result of improved diets and health (based on 99-00 program data).

Source of Federal Funds – Smith-Lever 3b,c&d Scope of Impact – State Specific

Goal 4: Greater harmony between agriculture and the environment.

Overview:

The *Oregon Invests!* Database includes an environmental index for each research and extension project and program. To access programs with high environmental impacts visit http://oregoninvests.css.orst.edu/ and click in succession: Search the Database – Profile Search – Environmental. Clicking on a project title will produce a PDF file detailing the project.

Impacts: The Extension programs with the highest environmental impact indexes include:

- Building a Multi-Tactic Pheromone-Based Pest Management System in Western Orchards
- Impact of Manure Application Timing on the Migration of Nitrates in Groundwater
- Riparian Plant Community Reestablishment
- Enhancing Farm Income Through Renewable Energy Generation
- Wise Manure Management for Oregon Dairies
- Small Acreage Horse Farms Adopt Practices to Improve Water Quality
- Collaborative, Integrated, Electronic, and Systems-Oriented Learning
- Extension Water Quality
- Rangeland Resources Extension
- Extension Sea Grant Marine Education Program
- Integrated Fruit Production Education Program
- Watershed Management
- Stopping Soil Erosion, improving Economic Returns in Oregon's Dryland Cropping System
- Wallowa County Nez Perce Tribe Salmon Habitat recovery Plan and Multi-Species Habitat Strategy
- An Area-Wide Pome Fruit Pest Management Program for Pear in Southern Oregon
- Sound Forage/Livestock Systems on Oregon's Grazing Lands
- Whale Behavior and Habitat Assessment from Satellite-Monitored Radio Tags
- Mobile Solar-Powered Livestock Management
- Forage information System on the World Wide Web
- The Pacific Northwest Plant Disease Management Handbook
- A web-based System of Phenology Models to Improve Crop and Pest Management
- Extended Education in Berry Crops
- Integrated Pest Management in Hazelnut Production
- Mid-Columbia Small Farms & Acreage Program

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Multi-state Integrated Research and Extension

The Extension Forestry program emphasizes productive, well-managed woodlands and intelligent use of forest products

Extension's Forestry program has grown over the past 25 years both in educational delivery capacity and in the breadth of its program content. Educational programs are focused on three strategic program delivery goals that drive allocation of resources and associated development of projects. They are to:

- Improve the competitiveness of forestry and forest product enterprises. The forest products and services sector will continue to be an important economic force in the state's economy and can be strengthened through educational programs that focus on industry performance.
- Engage the public in constructive dialogue about the future of Oregon's forest resources. Issue-based education may help overcome the tendency for an urbanized society to grow disconnected from its relationship to natural resources.
- Enhance stewardship and sustainability, increase skills, learning capacity and leadership development among client group members to help them implement more informed and effective management practices.

While somewhat variable by year, the Extension Forestry program typically provides about 375 organized educational events and reaches nearly 200,000 educational contacts through newsletters, satellite conferences and broadcast of low-power radio messages at strategic locations.

Extension Sea Grant helps people understand, rationally use, and conserve marine and coastal resources

OSU Extension Sea Grant (ESG) works to improve the lives and livelihoods of Oregonians on the coast and throughout the state. Faculty are located on the OSU campus, at the Hatfield Marine Science Center in Newport, along the Columbia River, in metro Portland, in the Willamette Valley and in communities along Oregon's 296-mile coast. Extension Sea Grant staff forge community connections, conduct applied research, disperse research-based information and form collaborative partnerships with other coastal agencies and organizations such as the National Oceanic and Atmospheric Administration, the Governor's Natural Resource Office, the Oregon Watershed Enhancement Board and related state agencies. ESG also partners with faculty in the OSU colleges of Forestry, Oceanography, Agricultural Sciences, Liberal Arts, Business and more.

The Extension Energy program helps individuals and businesses improve efficiency and productivity

The Oregon State University Extension Energy program, housed in OSU's College of Engineering, helps Oregonians improve the energy efficiency of their homes and businesses by providing technical assistance and education. This interdisciplinary program relies on teams of Extension Energy faculty, students and citizen volunteers. They work with manufacturers, schools, businesses and individuals to improve health, safety, productivity and energy stewardship. Due to loss of essential grant funding, the Extension Energy program based in the College of Engineering was terminated during 2001.

Key Theme: Water Quality

Enhancing water quality/protecting water resources

OSU Extension conducts a broad array of water-quality education efforts. They include educating homeowners and school children about protecting water quality, educating dairy farmers about managing their non-point source pollution and educating range users about protecting riparian areas.

Improved well water quality begins with education

OSU Extension offers well water quality education programs to encourage homeowners with wells to better protect their water supplies. In Lane County, Extension education programs have helped rural homeowners understand the relationship between nutrient application rates and the nitrate level in their wells.

Marine education gives teachers and students real-world lessons

Extension Sea Grant sponsors coursework and ongoing field experience for teachers and students on monitoring water quality in rivers and estuaries. Schoolteachers annually take ESG summer workshops. They then use this coursework in on-site classes taught to public school students each year through school programs at the OSU Hatfield Marine Visitor Center. 12,000 students took part in intensive labs, workshops and field work in subjects including oceanography, climate, ocean habitats, water quality, marine animal identification and coastal processes.

Outcome – 200 teachers reach 10,000 teaching them in depth marine education based on current scientific facts and research

Outcome – 42 Oregon and 1 California schools actively have students participate in a stream monitoring project where students learn about the importance of healthy streams and the populations of the creatures they support.

Impact -- In several instances, communities have used the results of their on-stream testing to make improvements or be alerted to potential problems. The collected data is downloaded to a website and in some cases the data collected by the students is the only data available and is valued by government agencies.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – State Specific Oregon, California, NW region

Appropriate livestock management is compatible with water quality

Extension workshops, seminars and field days around the state have helped livestock producers manage their upland and streamside habitats for increased livestock productivity and higher water quality objectives through improved vegetation management. Livestock producers learn pasture renovation and riparian management techniques that are compatible with livestock production and water quality.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Multistate Integrated research and Extension WA, ID, MT, NV, WY, CA

Key Theme: Integrated Pest Management

Integrated Pest Management (IPM)

IPM is integrated throughout OSU's Extension Agriculture program, including publishing the well-used PNW Insect, Weed and Plant Disease Pest Management handbooks. The IPM approach to crop production utilizes a wide range of methods for managing crop pests. Environmental impacts as well as costs and benefits are considered.

OSU Plant Clinic

The Oregon State University Plant Clinic is a diagnostic facility housed in the Department of Botany and Plant Pathology. Its mission is educational. Clients are helped to recognize the nature of the plant problem (diagnosis) and manage the disease or disorder using proper control methods, including cultural, biological, and chemical measures. Emphasis is on prevention of problems by proper management.

Outcomes: 1,027 samples were received and examined in 2001. 42% of the samples had disorders caused by fungi. Growers submitted 35% of the samples, consultants submitted 21%, Extension faculty – 19%, Landscaper/Arborists – 8%, researchers – 7%, home gardeners and others – 8%. 14 new diseases were detected and identified.

Insect Identification Clinic

Insect and related invertebrate identification, including damage diagnosis, is the primary activity of the Clinic. A reference collection is maintained and enhanced, fact sheets are prepared and updated, and training classes and lectures are given. Education activities include Museum Days and Bugs Alive (a small insect zoo).

Outcomes: 577 specimens were identified. A web site was developed for grass seed insects online at http://www.ent3.orst.edu/smartkey/. 1700 primary students participated in Museum Days. Bugs Alive was exhibited in Portland, Eugene, and Coos Bay. Two new crop pests – cherry lace bugs and geometid moth were identified in Oregon.

Reducing chemical use while increasing tree fruit production

Nearly 70 percent of the cherry producers in Wasco County are now using Extension's Integrated Fruit Production (IFP) Program, a holistic approach to the economical production of high-quality fruit. These widely adopted methods give priority to environmentally safe methods.

Impact: IFP has resulted in nearly a 50 percent reduction in fertilizer use, better calibration of sprayers, expanded monitoring of crop conditions and pests, and more extensive use of low-impact pest control.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Multistate Integrated Research and Extension WA, ID

Key Theme: **Air Quality**

Grass seed production with reduced environmental impacts

OSU research and Extension programs have developed ways to help grass seed growers reduce their dependence on field burning after harvest for field sanitation. Now OSU researchers and Extension agents are helping make grass seed production practices more cost effective, profitable and environmentally protective. A Web site for grass seed growers, provides timely information 24 hours a day online at http://www.css.orst.edu/seed-ext/

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Multistate Integrated Research and Extension, WA **Key Theme: Forest Resource Management**

Mixed Species Management project

Oregon forest owners are increasing interested in managing stands of mixed species. The Mixed Species Management (MSM) project is designed to develop useful information for management of mixed-species forests in Oregon. Information is shared via a "living" MSM bibliography and regional MSM expert forums. A draft article was written for the Journal of Forestry on management of mixed species stands. An eastern Oregon publication on MSM is in press (Eastside Management Manual).

GREAT project

Woodland owners considering selling timber from their lands are finding technical help through the Grass Roots Economic Analysis Tool, known as the GREAT project. With the aid of a computer model, woodland owners can create a forest management plan tailored especially to their particular circumstances. This specialized information is designed to help them customize their decisions about where, when, how much and how to harvest from their lands.

Backyard Woodlands program

As urban population centers continue to expand and fragment the forest base, the Extension Forestry Backyard Woodlands program seeks to provide materials and information to woodland owners on how best to manage and protect forest ecosystems of small acreage. The Backyard Woodland Program aims to improve the forest stewardship, fire safety, forest health, and resource protection of landowners who own 20 acres or less. A Backyard Woodland Program notebook was developed containing chapters on Stewardship and Woodland Planning, Woodland Ecology, Tree & Shrub Identification, Woodland Health, Tree Care, Forest Tree Establishment, Forest Products, Wildlife Habitat Enhancement, Wildfire Protection, Water Resource Enhancement, Regulations, and Assistance.

Outcome - 60 backyard woodland owners attended 3 regional workshops.

Resource Management Planning program

Extension Forestry continues to aid forest owners through the Resource Management Planning program, which is designed to enhance the management planning skills of woodland owners and thereby improve the management of family forestlands in Oregon. To achieve this a statewide curriculum is being developed and delivered. A set of statewide Oregon Stewardship Planning Guidelines have been developed to coordinate Stewardship Plans produced by various programs.

Outcome – 19 landowners attended a pilot workshop and are developing Management Plans.

Master Woodland Manager program

Since 1983, OSU Extension Forestry has offered the Master Woodland Manager program designed to use advanced level forest landowner education as an incentive to attract experienced forest landowners for volunteer work that stimulates additional forest management. Candidates are screened and receive an 85-hour, 10-module instructional package and supervision by Extension foresters. Each Master Woodland Manager donates a minimum of 85 hours of volunteer service in exchange for the free training and materials. In the 18-year life of the program, over 300 volunteers have been trained.

Outcome – 75 volunteers received advanced training at the MWM Mini-College

Stamp of forestry excellence

Extension's Sustainable Forestry Partnership helps forest landowners consider whether and how to certify that their timber is managed in an environmentally sound way with the goals of promoting forest health and protecting wildlife and endangered plants. A recent study compared two major certification programs with the level of protection required by the Oregon Forest Practices Act. A report on the study is being published in 2002.

Attacking a spreading forest disease

Almost unheard-of a few decades ago, the fungal disease Swiss Needle Cast is attacking Douglas-fir trees in Oregon's coast range at an alarming rate, stunting the growth of Oregon's primary timber crop. The disease, if left unchecked, could cause millions of dollars in lost timber revenues. Through a new Cooperative Research and Outreach Project, Extension forestry experts are developing strategies to combat the outbreak.

Outcome – 360 foresters and landowners attended 18 different presentations & workshops

Project Learning Tree

The Oregon Forestry Education Program is the Oregon sponsor of Project Learning Tree (PLT), as international environmental education curriculum. The OFEP office coordinates all aspects of delivering PLT and associated forestry education workshops. The workshops train K-8 and secondary educators to deliver the PLT curriculum to their students.

Outcome – 1098 teachers delivered the PLT curriculum to 16,500 students

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Multistate Integrated Research and Extension WA, AK Key Theme: Wildlife Management

Expanding watershed health

The Extension Agriculture, Sea Grant, and Forestry programs collaborate in developing and delivering the Watershed Stewardship Education Program (WSEP), a vital part of the Oregon Plan for Salmon and Watersheds. This flagship educational program is for watershed council members and others who wish to understand and improve the operation of their watershed and of their watershed council itself. WSEP comprises eight modules: Watershed Processes, Stream Ecology, Evaluation and Reduction of Upland Erosion, Riparian Area Function and Management, Evaluating and Improving Fish Habitat, Wetland/Estuary Evaluation and Enhancement, Working Together to Create Successful Groups, Water Quality monitoring. By completing the WSEP program and a 30-hour watershed evaluation or enhancement project, participants become Master Watershed Stewards. The Oregon Watershed Enhancement Board recognizes WSEP as the primary training resource for implementing the Oregon Plan for Salmon and Watersheds. The Certified Crop Advisor Program (CCA) and the Oregon Professional Logger Program (OPL) accredit WSEP. WSEP has grown into a national Sea Grant project under the National Outreach Initiative, which will make the educational materials develop for WSEP available to programs across the country. Advanced modules of WSEP are being developed for Fish Passage, Upland Road Evaluation and Improvements, and Stream Morphology.

Outcomes – Twelve programs of 8 workshops (96 workshops) have been delivered, plus 7 individual workshops. More then 1,500 individuals have participated with 250 completing all 8 workshops and a project to be recognized as a Master Watershed Steward.

Key Theme: Energy Conservation

School indoor air quality

Funding from the U.S. Environmental Protection Agency enables OSU Extension Energy program staff to work with Oregon school facility managers, teachers, nurses, parents and Oregon Head Start programs to improve air quality in homes and schools.

Outcome: During 2001, site visits and training programs on reducing childhood asthma were conducted at 40 school facilities throughout Oregon. Most buildings housed migrant Head Start programs.

OSU Extension works to improve boiler safety and efficiency

Extension Energy staff, working with the support of Oregon's Boiler Board and State Boiler Master, developed boiler safety education programs for building maintenance personnel, and more advanced boiler maintenance education programs for operators of heating boilers.

Master Recycler volunteers work to reduce solid waste

The Master Recycler Program is a community education project focusing on waste reduction and recycling. Interested volunteers receive at least thirty hours of training in solid waste issues. In return for their training they volunteer at least thirty hours in community education activities. Monthly continuing education and follow-up meetings are provided. Master Recyclers are active at farmer's markets, hazardous waste roundups, school classes and events, fairs and community events, cleanup events, and composting demonstrations. 261 volunteers are active Master Recyclers, of which 160 are certified.

Outcome: 36 new Master Recyclers were trainer in 2001.

Outcome - During FY 01, program graduate volunteers made 8,045 education contacts, volunteered more than 960 hours, and reached an additional 7,650 clients through newsletters and newspaper columns.

Source of Federal Funds - Smith-Lever 3b&c Scope of Impact - Integrated Research and Extension

Goal 5: Enhanced economic opportunity and quality of life for Americans.

Overview:

4-H Youth Development programs bring the university to youth

4-H programs have benefited the citizens of Oregon for nearly 90 years. There have been many changes over the years, yet Oregon 4-H is still basically about helping youth develop life skills that will make them productive members of society. Even so, 4-H has changed in some dramatic ways. Last year, 50 percent of 4-H members came from urban areas, while only 14 percent came from farms and another 36 percent from towns of fewer than 10,000. About 35 percent of 4-H participants were in kindergarten through third grade, but the biggest percent is still from the 4th through 6th grade at 36 percent. Environmental Education is now the largest project area with 30 percent of the projects while Animal science is the second largest with 22 percent. Science and technology is third with 15 percent, and nutrition and heath is fourth with 13 percent. Oregon 4-H youth participated in over 117,600 projects in 2001.

The Family and Community Development program encourages families and communities to be nurturing and caring

Extension's Family and Community Development program has evolved in recent years to encompass contemporary issues of individuals and families such as parenting, financial management, teen pregnancy, low-income nutrition, childcare and the elderly. Interdisciplinary educational programs are conducted throughout the state in partnership with communities. Extension faculty on campus and in each Oregon county develop programs for individuals and families in communities based on the local needs and opportunities. The goal of the program is to strengthen the capacity of families to:

- Create and manage resources
- Maintain overall health and wellness
- Partner with others in building caring and safe communities

Key Theme: Youth Development/4-H

4-H volunteers make a big contribution

Impact - Over 5,700 adult volunteers give their time to serve as teachers, coaches, mentors, counselors and friends to Oregon 4-H members. During the year, they shared more than \$15 million worth of their time to help more than 62,300 4-H members develop life skills that will help them succeed as they become adults.

Oregon Focuses on Leader Development

Every county has a minimum of two hours of training, with some counties requiring up to 8 hours for all new 4-H leaders. Topics vary, but most counties include information on risk management, required paperwork, where to find resources and starting this past year child protection issues became a required part of training. In addition to the training for new leaders, opportunities are available for ongoing leaders to gain new skills (i.e., how to work with youth displaying challenging behaviors and how to take on middle management roles).

For the 2000-2001 4-H year 5701 adults were involved as 4-H leaders in Oregon. The demographics of Oregon's 4-H leaders include:

- 80% female/20% male
- 4% minority
- 3% are identified as being involved in middle management roles
- Adult volunteers are from all locations in Oregon farms, rural, urban, cities

In addition to new leader training being conducted in all counties, three specific outreach efforts were reported this year.

- 1. Lane County developed a program to increase the cadre of volunteers trained in middle management roles that lead to the establishment of a Fair Management Committee.
- 2. Deschutes County undertook a survey to ascertain the reasons for enrolling as a 4-H leader in the county and the reasons for leaving. Data from the survey will provide insights into volunteer recruitment, training and retention.
- 3. Douglas and Lane counties worked together to develop a program related to working with youth with challenging behaviors.

The information that follows relates to these efforts.

Accomplishments and impacts

Development of a Fair Management Committee in Lane County resulted in a more efficient way to manage the Youth Fair. Highlights of the impact of this committee on the total 4-H program include:

- The 4-H Leaders Council has been able to look at leader needs and educational programming instead of managing fair situation.
- A 4-H leader has taken in the editor role for the fairbook.
- Offered a very successful media workshop in collaboration with KVAL-TV
 which resulted in terrific media coverage and an increase in public attendance
 at the fair.

Results of the survey of former Deschutes County 4-H leaders has resulted in the following:

- A better understanding of why adults volunteer to be 4-H leaders (1st, was the volunteer's need to make a difference in youths' lives).
- An understanding of why adults left the program as children leave so do the parents/volunteers.
- Both of the above has lead to the development of a mentoring program for new 4-H leaders. Thirty mentors have been selected at this time. The impact of the results of the survey and the beginnings of the mentoring program are yet to be seen.

Teaching evaluations from three of the presentations on working with youth with challenging behaviors shows the following:

- The rating of an individual's knowledge level before and after the class went from approximately 3.0 to 4.3 on a scale of 1-5 with 5 being high.
- Participants in the workshops are able to identify a number of ways to use the information in ongoing 4-H programs (i.e., camp counselor training, after school programs, networking with other youth serving agencies, etc.).

Learning today to lead tomorrow

Older youth have many opportunities to learn and practice their leadership skills through 4-H. Each summer, many teens serve as camp counselors, helping younger children enjoy the outdoors or leading them in a variety of educational and recreational activities at camps and conferences. The older youth get to be the campers at such programs as the Know Your State Government conference in Salem and the 4-H Summer Conference at OSU.

4-H Survivor Camp teaches Life Skills

4-H Survivor Camp is a weekend program for youth in 9-12th grade that provides real-life opportunities for youth to experience the different aspects of living on one's own. The program takes place in a rural setting, beginning on Friday night and ending Sunday afternoon. The program takes it name from the popular TV show "Survivor" and follows a similar process of learning how to survive. The harsh realities of the TV show, like surviving arid deserts and wild animals, are replaced by the harsh realities of independence including living on a paycheck, applying for a job, finding a roommate, keeping a budget, and hooking up utilities. Real life situations are used including finding an "apartment" (a room in the retreat lodge), and determining if the apartment is affordable based on the person's income (how to interpret a paycheck). Those who find themselves strapped for cash search the classified ads for a better paying job, or look for a roommate to help with expenses. Those who choose to apply for a new job complete a job application and go through an interview with a real business owner. The participants prepare the meals after receiving instruction on nutritious and low-cost food preparation. In keeping with the theme of the TV show, there are camp bonfires that serve as the

"Tribal Council," a time and place for participants to come together to reflect on their accomplishments as well as the real struggles involved with living on one's own.

Outcomes - Evaluation of *4-H Survivor Camp* focused an assessment of participant learning. A retrospective post-then-pre assessment on the learning outcomes was conducted. A paired "t" test was used to analyze changes in mean scores on each of the program outcomes. Participants reported significant changes in their level of knowledge in the following areas as a result of attending *4-H Survivor Camp*:

- How to rent an apartment
- How to write checks
- How to get services (utilities) connected
- How to budget a paycheck
- How to interview for a job
- How to write a resume
- How to cook nutritious meals

4-H Wildlife Stewards partner with local schools

In FY 01, almost 15,000 students participated in a new master volunteer program that matches trained volunteers with local schools. 4-H Wildlife Stewards receive 40 hours of training. In return, they give a minimum of 50 hours to help a local school establish a natural habitat area to complement lessons in science, math, art, history and other subjects.

Outcome: The program received a National Science Foundation grant for \$740,000 to support a three-year project to take the program statewide.

Other Environmental Program Highlights

The Tillamook Co. Watershed Stewardship Project logged 1,353 volunteer hours, and reached 405 youth with their in-school programs. The restoration work contributed noticeably to both watershed health and community livability. Teachers that responded to the evaluation rated their students on a 1-5 scale with 5 being high. They indicated students' knowledge at 2.75 prior to the lessons and 4.25 following the lessons.

The new Master Science program-training workshop for adult leaders began the introduction of the statewide program in October 2001. Participants at the initial workshop rated it a 5 on a scale of 1-6. All respondents indicated they would recommend the program to others. The evaluation also revealed that volunteers increased their knowledge about the 4-H Wildlife Stewards Program from 2.2 to 4.7 on a 1 -5 scale; they increased their knowledge of their role as a steward from 2.1 to 4.4; they increased their knowledge of how to teach science informally from 2.5 to 4.0.

Outcome - 34,590 youth participated in one or more natural resource educational programs in 2001.

High Technology Programs

Outcome - 7970 students participated in the 4-H Science and Technology projects in 2001.

Two very different examples of **science and technology** programs are the Tillamook County After School Science Club Program and the Washington County Web Wizards. These are examples of the **new and innovative programs** in Oregon.

Tillamook County After School Science Program

The Tillamook youth audiences come from a primarily rural area where 13.2% of the county population lives in poverty. One of the elementary schools has approximately 44% minority students, primarily Hispanic. The Nutrition and Food Safety program has been delivered to approximately 357 students. The objectives were to increase students' knowledge about nutrition and food safety; to enable participants' to make better food choices; and to teach basic cooking skills. Each lesson included a hand washing activity, a nutrition lesson, and a cooking activity.

The Tillamook Science club activities address the need for more positive, educational after school activities for 4-6 graders. It reaches approximately 32 youth each trimester. 103 different youth have participated over a two-year period. The objectives included strengthening science knowledge and skills while assisting youth in mastery of the 5th grade Oregon Science Benchmarks. The program also intended to build a positive opinion of science, develop teen teaching and leadership skills, and build recognition of 4-H as an educational program.

Indications of the success of the Tillamook Nutrition and Food Safety program for grades 1-3 are primarily in the form of anecdotal reports from students, teachers, and parents indicating that behavior has changed with regard to hand washing and preparing some of the foods at home. A pre/post retrospective evaluation for the 4-6 grade program indicated that not only knowledge level but also changed behavior had occurred. 98% of the youth who completed the evaluation indicated that they improved practices in food preparation and safety, including washing hands more carefully and home preparation of the recipes presented in class.

Outcome: 84% of the fifth grade participants in the after school science program met the Oregon Science Benchmarks compared to 58% for the school district as a whole. Both youth and their parents have indicated a significant growth in the youth's science knowledge and skills.

Washington County Web Wizards

The Washington County CyberSeniors-CyberTeens program starts with the 4-H Web Wizards program. In Oregon, Intel provides funding and mentoring to help Latino youth succeed in school by learning basic computer skills and web page design. Now the 4-H

teens are working with retired teacher volunteers and the CyberSeniors.org curriculum to teach veterans and senior citizens how to access and use the Internet.

Outcomes: Teens in the Washington County program acquire teaching skills and a sense of being valued by the community while veterans and seniors will be able to utilize technology to retain and/or regain their independence, dignity, purpose, health and community.

Reaching out to Oregon's fastest growing population

Hispanic youth and their families have a new friend in the 4-H Youth Development program. Participation in 4-H by Hispanic/Latino youth increased to more than parity (10.9 percent of 4-H participation compared to 9.4 percent of school age population) in the past year with 6,483 participants. Special programs help these youth learn the value of staying in school by providing them after-school alternatives and teaching them how to use the latest technology.

Outreach programs included high tech web page design and videography programs in Washington County; cultural dance clubs in Morrow and Hood River Counties, soccer clubs in Morrow, Umatilla, and Hood River counties; and mentoring and after school programs in Multnomah and Marion Counties. Morrow and Umatilla counties continued their Hispanic Youth Leadership Conference for the 11th year, and graduates now return to the conference to help spread a message of hope and encouragement to the high school students that attend the annual conference. The Oregon Outreach Program team received the NAE4-HA award for excellence in Diversity program in 2001.

Outcome - In 2001, 6,483 Hispanic/Latino youth participated in 4-H programs that were specifically designed for their needs and interest. 135 Hispanic/Latino adults served as volunteers to help the youth in their communities with everything from high technology to cultural dance and soccer.

Source of Federal Funds - Smith-Lever 3b&c Scope of Impact - State Specific

Key Theme: Children, Youth and Families at Risk

Children and Parenting

OSU Extension is a major and respected resource for research-based parenting and child development education, and one of only a few such resources in many communities in Oregon. Extension faculty provides high quality, research-based parenting education for families, sometimes as a series, or on request. Schools, agencies, the local Commission on Children and Families request parenting education from OSU Extension.

Two counties do extensive childcare provider training, a metro county and a rural county in which the Extension office serves as the Child Care Resource and Referral Center (CCR&R). In the rural county there was an extreme shortage of child care providers this year. Newspaper coverage of the shortage generated 24 calls from interested individuals. A special effort in the metro area provided Spanish-speaking parents with education on domestic violence.

County Extension offices distribute the Child Care Connections newsletter series and the age-paced newsletter series. In addition, many articles appear in newsletters, local newspapers, and on the radio. In 2001, the Principles of Parenting curriculum was distributed to counties for use in future programming.

Outcomes: For all learner outcomes listed below, a total of 2,126 participants were reached. Eighty-seven educational programs were taught and 2,145 age-paced parenting newsletters were distributed in 2001.

Learner Outcomes	Educational Programs Delivered	Number of Participants
Provide high quality, research-based childcare provider	68	587
training. Increase knowledge and understanding of best		
practices in infant and childcare.		
Parenting series designed to teach child development, guidance	87	925
techniques, communications, safety, etc.		
Increase participant understanding of child development	17	317
Increased knowledge of quality parenting education process and content.	4	95
Increase knowledge of available services, and increase empathy among participants to families with young children with special needs	1	36
Increase knowledge of and access to quality child care	Referral	414
Increase knowledge of substance abuse issues among youth	1	33
Increase self-esteem in children.	1	10
Increase knowledge among parents of factors related to student success	1	41
Babysitting Training.	11	126
Distribute age-paced newsletters to parents of new babies and toddlers.		2,145

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – State Specific

REACHING improves basic living skills

Family and Community Development faculty use the REACHING program with families that have limited income and limited basic living skills. The program includes several learning modules that emphasize problem solving and decision making; managing resources, time and money; communicating and relating to others; and acquiring, analyzing and using information.

Key Theme: **Aging**

The OSU Extension Service is known statewide for its programming, publications, and conferences in aging. Promoting the well being of older adults is also one of the strategic directions for Extension. External and internal grant funding amounted to \$212,601 in 2001. Collaborative relationships continue between OSU and the Oregon Health and Science University (OHSU), Portland State University (PSU), Legacy Caregivers and the Oregon Seniors and People with Disabilities Division. We sought external funding collaboratively with OHSU and PSU; worked with Legacy Caregivers to produce a Spanish version of our videotape, "The Dollmaker", worked with the staff trainers at Oregon Seniors and People with Disabilities Division to produce the OSU Gerontology conference and to assist them with publications for their newest Oregon Public Broadcasting caregiver broadcast. One of our County offices hosts the lifespan respite care network, and until the recession forced cutbacks, had received the contract to provide support services to family caregivers.

Outcomes: For all learner outcomes, a total of 2,837 participants were reached. The numbers of educational sessions exceeded 140. The revisions of several Extension Pacific Northwest (PNW) publications are in press, and a new publication, Hiring and Working Successfully with In-Home Care Providers, PNW 547, was published in January 2002.

Learner Outcomes	Educational	Number of
	Programs Delivered	Participants

Increase knowledge of age-related changes that affect driving and strategies for working with older drivers	13	339
Increase knowledge of diagnosis, assessment, and treatment of Alzheimer's disease and related dementias	10	225
Increase knowledge of risk factors, signs and symptoms, and treatment of depression in later life	11 counties	626
Professionals who work with older adults will gain knowledge and skills that will assist them in their professional duties. Caregivers will gain information to help them in decision- making as they provide care to family members.	2	458
The 25 th annual statewide OSU Gerontology Conference, designed for gerontology professionals and service providers, and a county		
Learner Outcomes (continued)	Educational Programs Delivered	Number of Participants
Aging Family Members Conference, designed for aging family members, were held in 2001. 54% of the state conference participants were social service providers, and 46% were health care providers.		
Grandparents raising grandchildren and agency staff will increase their knowledge of legal and financial issues involved.	5	43 + the other 2 sites
The Grandparents Raising Grandchildren Extension Teleconference: 8 sites hosted audiences, including 4 Extension sites. AARP donated \$2,000 toward the effort.		
Improve intergenerational connections between grandparents and grandchildren	4	66
Family caregivers will identify personal stress; learn to communicate in challenging situations; learn to master care giving decisions	6	357
Increase knowledge of healthy aging	2	365
Increase knowledge of assistive devices that enable older adults to remain independently in their homes.	8	116
Increase knowledge of and access to respite care	2	24
Increase knowledge of use of the Internet	1	218

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – State Specific

Key Theme: Family Resource Management

The OSU Extension Service is known statewide for its non-partisan programming, publications, and conferences in Family Resource Management. Extension faculty conducted programs in financial management education and awareness of poverty throughout Oregon. They reached a wide variety of audiences, including Head Start, Habitat for Humanity, and JOBS program participants. Areas of concentration include financial education for limited resource families and older adults. A conference for farming families was offered this year. A tradition of offering a series of classes on Women's Financial Planning in partnership with AARP continues.

Outcomes: More than 74 educational programs were offered. For all learner outcomes listed below, a total of 2,387 participants were reached.

Learner Outcomes	Educational Programs Delivered	Number of Participants
Increased knowledge of decision-making tools to transfer non- titled property	4	90
Increase knowledge of types of telemarketing and mail fraud	2	200
Increase skills to make financial decisions and evaluate the profitability of farming operations, retirement and legal issues	4	120
Increase information necessary to make money management and debt reduction decisions	1	17
Budgeting and financial management for limited resource students. Participants will gain budgeting information to help	30	489
them achieve personal financial goals.		
Women's financial management training.	8	384
Increased awareness and understanding of families in poverty	27	1,040
Recognize the impacts on families and communities of simplifying their lives	2	47

Source of Federal Funds - Smith-Lever 3b&c Scope of Impact – State Specific

Key Theme: Leadership Training and Development

Leadership and community development

The Family and Community Leadership (FCL) program is actively supported in 8 counties. At the state level the major activities center around individual trainings in counties, regional trainings (advanced training) and the State Training Institute (STI).

Outcome: Six workshops provided county trainer skill building focused on volunteer management and learning styles for 300 trainers

Outcome: Graduates of FCL have responsibility for teaching leadership workshops across the nations for Habitat for Humanity and the Community Education Association using the FCL Leadership curriculum.

Outcome: An advanced training workshop in public policy was provided for 40 trainers including county elected officials, a state legislator, a Congresswoman, a lobbyist, and an elected staff official.

Outcome: The 4-day State Training Institute was attended by 45 new trainers and staffed by 15 experienced trainers. The 30-hour institute is the major training activity for preparing new volunteer trainers in the FCL curriculum. Six hundred pages of train-the-trainer materials cover: Group Process, Effective Meetings, Public Policy, Teaching Others, and Volunteer Development. Each trainer is committed to giving back 200 hours of localized training to the community in which s/he lives. Several organizations including the Commission on Children and Families, Oregon Food Bank, and local Soil and Water Conservation Districts have taken advantage of the STI to train their own staff and volunteers.

Outcome: The FCL Board was organized during the year. The Board comprises one volunteer and one Extension faculty member from 8 counties. Developing policies on trainer payback, recommending changes in curriculum, providing oversight to select topics of advanced training, reporting county activities, and advising the State Coordinator are responsibilities of the FCL Board.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – State Specific

Key Theme: **Home Safety**

Improving installation of manufactured homes

During the past several years, the Extension Energy program, the makers of manufactured homes and the Oregon Building Codes Division have worked to improve the installation of manufactured homes. Energy program staff surveyed installation practices, reviewed industry set-up instructions and identified common mistakes and opportunities for improvement. Installation practices that previously varied by manufacturer and model were reworked into a common set of standards that can be followed by installers and enforced by local code officials.

Outcome: OSUES has distributed more than 6,000 copies of the standards for manufactured home installation, and Energy program staff have worked with Oregon's Building Codes Division to provide training on the new standards for the industry and code officials.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Integrated Research and Extension

Making the coast ready for earthquake, tsunami hazards

Because Oregon and the Pacific Northwest are vulnerable to earthquake and Tsunami hazards, the Extension Sea Grant program is cooperating with local, state, and federal agencies in the region to development measures to mitigation these hazards, particularly in coastal port and harbor communities. Pilot mitigation projects are being conducted with two coastal communities-Yaquina Bay, Oregon and Sinclair Inlet, Washington. With their help, a simple planning process and model mitigation measures are being developed that port and harbor communities in both states can adapt to their local situation.

Outcome - More than 150 local officials, community leaders, and university and agency technical advisors have participated in local community workshops. More than 120 peers have attended presentations about the program at four professional conferences/workshops.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – OR, WA Specific

Key Theme: Workplace Safety

Safer commercial fishing

Extension Sea Grant has a long history of working to reduce injury and loss of life on fishing vessels. ESG faculty designed and implemented the first commercial fishing vessel safety program to be certified by the U.S. Coast Guard. ESG delivered the program through a network of community colleges along the Oregon coast.

Outcome: Through 2001, Sea Grant had trained more than 900 commercial fishers.

Developing a first-of-its-kind safety program for charter skippers

Extension Sea Grant offered the first U.S. Coast Guard approved safety-training program for charter boat skippers in 2000. After the first class, skippers instituted a similar program for their own deck hands. Beginning in 2001, ESG saw a need to provide safety training to scientists, researchers and students who go to sea.

Impact – Documented instances of lives saved since the programs inception

Outcome -- 20 charter boat crewmembers and 200 researchers/scientists/students have learned how to increase safety on their vessels

Outcome – Nationally recognized and awarded program

Outcome - The Oregon Extension Sea Grant vessel safety program has served as a training model for local organizations such as Oregon Department of Fish and Wildlife, the Oregon Coast Aquarium, Oregon State University College of Oceanography, and others.

Outcome - The safety program continues to be adopted in other states. During 2001 Connecticut, Maine, and Massachusetts joined Alaska, Washington, Louisiana, and California in adopting the program.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Multistate Extension CT, ME, MA, AK, WA, LA, CA

Key Theme: **Tourism**

Sharing the wonders of the coastal environment

Educating school groups, teachers, local citizens and tourists about the coastal environment, marine animals and coastal processes, Extension Sea Grant faculty at the Hatfield Marine Science Visitor Center help to ensure continued wise use and conservation of this important natural resource.

Outcome – 200 teachers and 10,000 students learned of the wonders of the coastal environment

Outcome – 150,000 visitors view the exhibits and participate in Extension outreach educational activities at the Hatfield Marine Science Center

Key Theme: Impact of Change on Rural Communities

Helping fishing communities cope with change

Changing technology, markets and ocean conditions have resulted in ever more restrictive management requirements that are affecting the fishing industry, fishing families and coastal communities in many ways. OSU Extension Sea Grant agents helped organize meetings and conduct interviews and surveys to assess needs of fishing families

in economic trouble. Initially ESG produced and distributed more than 20 no-charge publications addressing practical aspects of fishing family life.

In 2001 when the groundfish industry collapsed, ESG quickly responded with the Groundfish Disaster Outreach Program (GDOP). This ESG effort teamed community, coastal and government agencies in a coast-wide response to face the crisis.

Outcome – \$100,000 in grants initiated the first pilot GDOP. The pilot project and collaboration with the fishing community gained another \$1.75 million in disaster relief with the commitment of another \$1 million.

Outcome – The Heads-Up! Website received 15,000 hits.

Impact -- 161 individuals and families are specifically being helped with these funds (retraining, transitioning out of fishing, etc.). Over 500 others have been helped through other ESG efforts.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – State Specific

Management Goal: Agricultural Communications

Biotechnology Education Program

The OSU Extension Service bought out 0.5 FTE of a senior faculty member in the Department of Botany and Plant Pathology to conduct the Biotechnology Education program. The OSUES Program for the Analysis of Biotechnology Issues (PABI) became the third Extension biotechnology education program in the U.S.

Outcomes: The program is online at http://osu.orst.edu/extension/pabi/. An informational presentation was made to the Oregon House Agriculture Committee on Issues in Agricultural Biotechnology. Media contact included four television, five radio, and eight print media. A new course, *Issues in Agricultural and Natural Resource Biotechnology* is being taught. The faculty member has delivered three sponsored public lectures and workshops and has made 38 presentations on biotechnology and biotechnology issues, including the CAST Biotechnology Communicators Summit in St. Louis, the Leopold Fellow Training in Tucson, the American Phytopathological Society Meeting in Salt Lake City, and Food of the Future II program in Vancouver, BC. The faculty member is co-investigator of a USDA/IFAFS funded program, *Public Goods and University-Industry Relationships in Agricultural Biotechnology*, in the amount of \$2 million over three years.

Source of Federal Funds – Smith-Lever 3b&C Impact – Integrated Extension, Research, and Academic Programs

Management Goal: Agricultural Communications

Family Forestlands Symposium

The Oregon Family Forestlands Symposium was conducted to identify issues and concerns faced by family forestland owners and to help identify ways that the Oregon Board of Forestry could address them. Symposium attendees shared their views on a variety of topics and talked about their role within Oregon's forest economy, the general public's understanding of that role, the opportunities and barriers to achieving sustainability, and their hopes for a policy environment that takes better account of their situation. This symposium was co-sponsored by a number of groups including Forestry Extension. Extension's role was predominantly to help design and facilitate the group discussions where participants shared their intense feelings. The results of the symposium and roundtables were documented in a publication titled "Sustaining Oregon's Family Forestlands."

Outcome - More than 300 family forestland owners attended the symposium and four regional roundtables

Source of Federal Funds – Smith-Lever 3b&C Impact – State Specific

Management Goal: Agricultural Communications

Forestry in the eye of the beholder

Individual points of view about forests are as different as the people who hold them. To some, forests are a resource to be wisely tapped. Others see forests as treasures to be preserved. Many others have opinions that lie between these opposite points of view. The third year of Oregon State University's Extension Forestry program, "Seeing the Forest," focused on planning for the 2002/03 art show. Venues have been secured for six communities. The show will focus on the link between our consumption and our forests. A pilot Youth Division of the show is being initiated.

Teachers gain natural resource knowledge

An intensive week-long course on Oregon's forest resources for 27 middle school and high school teachers addressed misconceptions about clear-cutting, forest lands and wildlife habitat. In its third year, the program seeks to provide accurate information about Oregon's forestry programs. The teachers learned about the many ways that timber is removed from forests, how some species of wildlife benefit from logging, and how many Oregon private landowners contribute to the state's forest resource base. A pre-test/post-test evaluation based on the educational objectives showed a strong and statistically

significant improvement in forestry knowledge of participants and was disseminated in a Journal of Extension article.

Source of Federal Funds – Smith-Lever 3b&C Impact – State Specific

Management Goal: Information Technologies

T1 Bandwidth for all Extension and research Field Offices

The Oregon State University Extension Service and the Oregon Agricultural Experiment Station selected the Network for Education and Research in Oregon (NERO) as the internet provider for all Extension field offices and Branch Experiment Stations. NERO is providing T1 bandwidth that is guaranteed to support video teleconferencing and streaming video. NERO is also providing Multicast. The installation was completed during the fall of 2001. Several streaming video programs have been conducted.

Source of Federal Funds – Smith-Lever 3b&C Impact – Integrated Extension and research Program

Management Goal: Institutional Engagement

OSU Industrial Assessment Center saves Oregon industry millions

The Extension Energy program's OSU Industrial Assessment Center helps Pacific Northwest manufacturers improve efficiency and reduce waste. Each year faculty-led teams of OSU engineering students visit at least 25 manufacturing facilities in the region to assess plant operations, at no cost to the facility. Students benefit by gaining valuable practical experience.

Follow-up surveys show that, on average, the more than 370 firms that received on-site visits have realized an annual savings of \$70,000 per plant as a result of implementing recommendations made by the OSU teams.

Impact: Total savings to industry from this program are more than \$25 million annually.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – Integrated Academic Programs and Extension

Management Goal: Institutional Engagement

Klamath Basin Water Allocation

In the spring of 2001, following a winter drought, the federal Bureau of Reclamation (BOR) determined that to protect endangered sucker fish (Lost River Sucker and shortnosed sucker) in Klamath Lake, the Bureau could not release irrigation water to some 1200 farms in the Klamath Lake region. In addition, minimum water requirements in the Klamath River, for the benefit of Coho salmon, further restricted the availability of water for irrigation. The management implemented by the BOR, as directed by the Endangered Species Act (ESA), was based on biological opinions of the Fish and Wildlife Service and the National Marine Fisheries Service.

The lack of water through the summer created a crisis for farmers, local communities, and the region--which includes Klamath County in Oregon and Siskiyou and Modoc Counties in California. The nature and extent of the crisis was a matter of debate that divided the community and stalled local, state, and federal responses. Further, the situation challenged all county and state level Extension programming in agriculture, natural resources, 4-H/youth, and nutrition to be relevant in a time of crisis.

The primary need was for an objective assessment of the effects of the decision. As no assessment of the environmental, social, and economic impacts of the decision was conducted under the ESA, there was an "information void". To fill this void the Oregon State University and University of California Extension offices collaborated to conduct an assessment of the issues -- environmental, social, and economic -- and develop concept solutions to the water allocation issue. The purpose of the assessment was to: a) raise the level of the discussion among the public, b) provide decision makers at all levels with information to respond to the crisis, and c) provide guidance for county Extension faculty in helping to serve in the time of crisis. The situation provided a unique opportunity for Extension research and teaching faculty in the region to be responsive.

An overarching reason for deciding to take this opportunity was to develop the two universities' institutional capacity to respond to community-wide change. The rapid change in environmental, technological, economic and demographic systems is creating similar community crises in Oregon and California, indeed, across the western states and nation. Oregon has at least three other communities that may be affected by decisions related to endangered species, and there are numerous ESA-related crises brewing across the western states. There are also situations involving rapid change related to technology, the economy, and demographics that are creating similar crises and information voids. There is a broad and compelling opportunity for Extension to provide leadership.

Although the project concerns environmental protection, economic development, multiple-use management, and watershed management a fundamental purpose of the process was natural resource education in its broadest sense. The implicit goal was to raise the quality of the discussion about the issue in the basin through an informed public, decision makers, and agencies. On campus, faculty involved in the project have organized a graduate-level class to teach students about decision making, policy, natural resource management, and community development.

Outcome: A 300 page report, "Water Allocation in the Klamath Basin: An Assessment of Natural Resource, Economic, Social, and Institutional Issues" online at http://extension.orst.edu/klamath/

Outcome: Over 100 people attended the draft report presentation, more than 200 questions and comments were received, and the web site has recorded over 2000 hits. The project provided for scientist/public dialogue.

Outcome: Most of the 2,000 residents of the Klamath Basin were made aware of the report by broad media coverage, including the press, television, and radio. The AP wire service and public radio extended the reach to an estimated 1 million people.

Outcome: A graduate level course is being offered as an outgrowth of the project.

Source of Federal Funds - Smith-Lever 3b&c Scope of Impact – Multistate, Integrated - Extension, Research and Academic Programs CA

Management Goal: Institutional Engagement

Poverty and Economic Well-being

In January 2000, the OSU Extension Service produced and distributed 850,000 copies of the 24-page tabloid *A Portrait of Poverty in Oregon*. A copy was inserted into every daily newspaper in the state. A web version is found at http://eesc.orst.edu/poverty/. During 2001, the publication continued to stimulate and support a series of educational activities focused on poverty and economic well-being. The most popular of these has been the poverty simulation.

Outcomes:

- 27 poverty simulations in 2001 involved 1,040 participants in 8 Oregon counties, California, Washington, and Idaho. Participants included adults and youth, human service professionals and volunteers. A Train the Trainer workshop was held in Portland with 53 participants.
- Journalists from five western states participated in the poverty simulation at a conference sponsored by the Casey Journalism Center at the University of Maryland. The conference, entitled "Reporting on Low-income Working Families in the Western States," was held at the University of Southern California in Los Angeles.
- Community Action Directors of Oregon, Washington, and Idaho participated in poverty simulations in Eugene, Seattle, and Boise.

- The poverty simulation was presented for the Leadership Oregon project sponsored by the Oregon Department of Administrative Services for mid-level managers. The Superintendent of Snake River Correctional Institute in Ontario, Oregon requested the simulation for his facility. The program was modified to simulate the challenges faced by former inmates when they transition back to Oregon communities. This new simulation has become part of new staff training for the Oregon Department of Corrections.
- The simulation has become part of new employee training for the Oregon Department of Adult and Family Services.

Source of Federal Funds - Smith-Lever 3b&c Scope of Impact – State Specific

Management Goal: Institutional Engagement

Oregon Family Impact Seminars

The OSU Extension Service and the OSU Family Policy Program sponsored the first Oregon Family Impact Seminar, *Helping Families Help Themselves*, on January 18, 2001, in the Oregon State Capitol Building. The event was co-sponsored by State Representative Lane Shetterly and State Senator Cliff Trow. More than 70 legislators, legislative staff, Governor's staff, state administrators and staff, educators, advocates, lobbyists, reporters, and students attended.

The seminar features two nationally recognized researchers. Dr. John Karl Scholz from the University of Wisconsin-Madison spoke on Earned Income Tax Credit and Dr. Terry Carrilio from San Diego State University spoke on Family Support Home Visiting. Both speakers also participated in informal meetings with policymakers. Executive summaries and written reports of the two seminar presentations were sent to all legislators and seminar participants. Due to demand, Dr. Carrilio's presentation was reissued as the first in a new Family Policy Bulletin series, "Investing in Families through Family Support Home Visiting" (SR1032). The Governor's Office has invited Dr. Carrilio back to Oregon in connection with the Governor's Children's Plan and had requested 500 copies of SR1032 for distribution in conjunction with her presentation.

Source of Federal Funds - Smith-Lever 3b&c Scope of Impact – State Specific

Management Goal: Institutional Engagement

Sustainability Tabloid

The third of the OSU Extension series of Public Issue Education Tabloids, "Looking for Oregon's Future: What Is Sustainability," was produced in 870,000 copies and distributed during 2001. A copy was inserted in every daily newspaper of the state with additional distribution through Extension and state agency offices. The goal of the publication is to "promote dialogue among Oregonians concerning the future of our communities, industries, resources and economy, and concerning the quality of life we want to make possible for our grandchildren." Six sections explore 1) the meanings of sustainability, 2) issues that are often linked to sustainability, 3) sustainability-related efforts in Oregon, 4) what is being done in other parts of the world, 5) the future, and 6) how to learn more and get involved. A web version is accessed at http://oregonfuture.orst.edu/.

The public Issues Education (PIE) Tabloid series is a key feature of **Oregon State University Engagement** with vital community issues across the state. The purposes, processes, outcomes, and impacts for these publication are explored in The February 2002 issue of the JOURNAL OF EXTENSION in an article titled, "*Tabloids – A Tool for Public Issue Education*." online at http://www.joe.org/joe/2002february/tt1.html

Source of Federal Funds - Smith-Lever 3b&c Scope of Impact – State Specific

Management Goal: Multicultural and Diversity Issues

Diversity: Responding to Changing Demographics

A full-time diversity specialist provides leadership to the organization in supporting the system to become an effective culturally diverse organization. Our plan for organizational change is derived from an assessment of the OSU Extension diversity climate and the level of intercultural sensitivity of current faculty. The ultimate outcome of this initiative is to create a dynamic and effective multicultural OSU Extension organization. An effective, dynamic, multicultural Extension organization is one in which the faculty and staff reflect the diverse cultures of this state and that faculty and staff can and do design and deliver culturally appropriate educational programs for the people of Oregon.

Impact - Building on our organizational commitment to diversity and the work of our diversity committee, we have moved toward creating an effective multicultural organization. Impacts include:

• designing culturally appropriate education

- -successful efforts statewide to work with Hispanic youth and families. The Latino Outreach effort won the NAE4-HA national diversity award this year.
- on-line database of Spanish language Extension materials available, including new gardening publications in Spanish
- language translation services available for staff at annual conference

-successful statewide efforts to work with low literacy and low income youth and families

• hiring more racioethnically diverse staff

- expanded our recruitment strategies to attract more diverse candidates
- hired six tenure track faculty of color
- internships for six college students of color to explore a career in the Extension Service

• increasing intercultural competency skills of current faculty and staff

- two new tools (book and website) developed to support staff in developing intercultural competency skills
- forty intercultural competency volunteers support Extension efforts to address diversity issues.

Source of Federal Funds – Smith-Lever 3b&c Scope of Impact – State Specific

Stakeholder Input Process

Between January 25 and April 7, 2000, needs assessment meetings were held in all 36 Oregon counties plus the Warm Springs Reservation. The products of those meetings are available at http://osu.orst.edu/extension/opod/needsassessment/needsindex.html. Special efforts were made to invite and include members of under-served communities and community members and leaders new to Extension. This broad cross-section of 842 community leaders identified 840 issues facing Oregon communities.

The issues were discussed and grouped during a May 9-10, 2000 Extension Strategic Directions Conference on campus. OSU Extension faculty, administrators and citizen advisors selected from all the issues, those that could be addressed through non-formal Extension education and grouped them into nine areas of program focus under three broad strategic directions. The conference participants then self-selected into working groups to begin development of plans-of-work. Summaries of the needs assessments and the results of the Strategic Directions Conference were reproduced and distributed to Staff Chairs and others for sharing with the participants in the needs assessment meetings and with all staff.

Strategic Direction A: Strengthening Communities and Economies Areas of Program Focus

- 1. Promoting economic Development and Diversification
- 2. Empowering and Engaging Oregonians

Strategic Direction B: Sustaining Natural Resources and Agriculture

Areas of Program Focus

- 1. Improving the Health of Oregon's Watersheds
- 2. Promoting and Enhancing Environmental and Economic Sustainability
- 3. Expanding the Understanding of Natural Resource Systems

Strategic Direction C: Enhancing Families, Youth, & Health

Areas of Program Focus

- 1. Promoting Positive Youth Development
- 2. Improving Health
- 3. Promoting Well-being for Aging Oregonians
- 4. Building Strong Families for Today

The Strategic Directions and input from other groups became the basis for the OSUES legislative investment package that was approved by the Oregon University System Board and submitted to the Governor for consideration in the legislative session for the 01-03 biennium. No new funds were obtained. Competitive grants of one-time funding were allocated to several projects addressing the Directions. Working groups are actively exploring possible grant dollars to implement their plans. The five program areas are incorporating the Directions into their program planning.

This special statewide stakeholder input process supplements the processes detailed in our OSUES 5-year Plan of work.

Program Review Process

There has been no significant change in our program review process since our 5-year Plan of Work.

Multistate Extension Activities

Components of the Oregon State University Extension Service flow easily across our borders with surrounding states. The largest multistate activity is the long-standing Pacific Northwest Publications (PNWPubs) program where publications that are relevant to all three states are jointly written and reviewed, published by the lead state, and made available to all three.

Each Extension Program Area and every Extension faculty member is expected to develop a professional network that includes peers in other states. These networks, whether formal or informal, involve information sharing, opportunities for professional development, curriculum and educational material development, and joint program development and delivery. Notable formal networks include PNW STEEP, small grain variety testing, potato variety testing, reduced field burning with grass seed production, the NW Center for Small Fruits, Tree fruit production along the Columbia, SARE Extension, Ornamental seminars, Cow-calf Management Guide, Intermountain Cow Symposium, Western Dairy Management, Small Acreage programs, Grazing of riparian areas working group, Mid-Columbia Valley Forestry Extension, Continuing Education programs in Forestry, and Situation and Outlook. 4-H Youth Development faculty work with Extension professionals in Washington and Idaho on curriculum development, leader forum, professional development, regional 4-H marketing, and impact assessment. PNW Extension faculty also collaborate on the Family and Consumer Science programs of high school financial planning, gerontology, parenting, welfare reform, and community food systems.

Under the leadership of the Western Region Program Leadership Committee, the Western Region states and territories are collaborating on three projects.

- 1. Bringing the University of Wisconsin Extension's Center of Excellence program on Evaluation to the Western Region.
- 2. Creating a comprehensive professional development program for Community and Economic Development.
- 3. Creating and managing the Western Extension Leadership Development (WELD) program.

Multistate programming and collaboration are essential tools in leveraging Extension's resources for maximum efficiency and impact. **Multistate activities make it possible for states to mount extension programs of much greater scope than could otherwise be supported by their corresponding research programs.** Multistate, regional, and nationwide activities give definition to the Extension "System."

The impacts of multistate programs in the western region are highlighted in the "Best of the West" website http://www.ag.unr.edu/wri/index.html

OSUES has established an audit trail for some multistate activities tied to Smith Lever 3b&c funds.

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 <u>Oregon State University</u> State <u>Oregon</u>		
Check one:X_ Multistate Extension Activities (Hatch Integrated Activities (Smith	Act Funds)	
	Actual Expenditures	
Title of Planned Program/Activity	FY 2000 FY 2001 FY 2002 FY 2003 FY 2004	
Pacific Northwest Publications NW Berry & Grape INFONET Ornamentals NW Seminars	0\$60,000 0\$10,000 0\$10,000	
Total	_0_ \$80,000	3/5/02

Form CSREES-REPT (2/00)

Integrated Research and Extension Activities

In 1993 Oregon State University integrated the land-grant functions by:

- elevating *Extended Education* (now *OSU Statewide*), including the OSU Extension Service (OSUES), to University-wide status;
- integrating OSUES field- and campus-based faculty into academic departments across the University;
- charging academic Deans with leadership responsibility for Extension programs;
- developing P&T guidelines that recognize and reward all three mission areas of the university -- teaching, research, and extension -- through one process;
- defining scholarship to include the integration and application of knowledge as creative intellectual work; and
 - creating a unique position description for every OSU faculty member by the joint effort of the faculty member and his/her supervisor and department head.

During 2001 OSUES commissioned a study of the impacts of the above changes on extension programs and faculty. The study revealed that extension faculty, both campusand field-based, believe there has been significant advances in integration in terms of the:

- closeness of the working relationship between on- and off-campus faculty,
- degree of integration of research and extension,
- degree to which academic units are implementing extension as part of the fundamental missions,
- degree to which research, instruction, and extension have equal status and importance, and
- extent to which scholarship activities carried out by extension faculty are enhancing extension programs.

The Oregon State University Extension Service spends in excess of \$4 million annually for the extension portion of the salary and OPE expenses of faculty with integrated assignments. Joint appointments in extension and research are the norm in the departments of the College of Agricultural Sciences. Twelve faculty located at research and extension centers and branch research stations have partial or full extension appointments. All multidisciplinary working teams include both extension and research faculty. Many of the Oregon representatives to Regional Research and Coordinating Committees have joint appointments with extension.

The impacts of integrated programs in the western region are highlighted in the "Best of the West" website http://www.ag.unr.edu/wri/index.html

OSUES has established an audit trail for some integrated activities tied to Smith Lever 3b&c funds.

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 <u>Oregon State University</u> State <u>Oregon</u>		
Check one: Multistate Extension Activities Integrated Activities (Hatch ActX_ Integrated Activities (Smith-Lev		
	Actual Expenditures	
Title of Planned Program/Activity	FY 2000 FY 2001 FY 2002 FY 2003 FY 2004	
IR4-Pesticide Registration for Minor Crops IPM for Nursery & Berry Crops New Landscape Plant Introduction Berry Production Systems	0\$20,000 0\$20,000 0\$20,000 0\$10,000	
Greenhouse Systems	0\$ 5,000	
Total	\$75,000	
	- Galacter	3/5/02 Date

Form CSREES-REPT (2/00)

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OSU Extension Service

Annual Contact Report

Year	2001
ı caı	2001

Clientele Contacts:

	White	Black	Hispanic	American Indian	Asian	Total	<u>Total b</u> Male	y Gender Female			Clientele Contacts <u>by</u> Program Volunteers
Agriculture	343,257	5,838	11,951	5,606	5,668	372,320	241,548	129,802	6,808	10,393	193,721
Engineering	1,773	23	127	24	3	1,950	1,101	849	0	0	10
4-H Youth	273,459	1,792	17,745	7,678	2,150	302,824	111,080	190,968	28,363	52,881	2,231,540
Forestry	44,841	195	1,145	1,005	630	47,816	32,122	15,693	905	918	2,892
Home Economics	110,112	1,305	12,194	2,792	1,067	127,470	42,841	82,444	14,744	23,326	108,990
Sea Grant	29,107	374	1,365	484	670	32,000	17,614	14,396	29	325	126,912
Administrati	19,654	184	537	6,140	304	26,819	13,370	12,875	6,584	10,912	49,592
Totals	822203	9711	45064	23729	10492	911,199	459676	447027	57433	98755	2713657

	Uses of M	lass Media:		Individual Contacts Through			
Satemic	of news	radio	Number of television programs			Number of website hits	
80	3 626	648	228	0	2 079 872	2 236 381	

Only direct contacts are recorded for race, gender and volunteers. Those include face to face, telephone, email, fax and personal letters. Each contact is listed under the most appropriate program area. Contacts with Extension Faculty are not included. To avoid duplicate counts when more than one Extension Faculty member teaches at an event, only the event host reports the contacts. * Report your direct contacts with volunteers. Program Volunteers are volunteers who have been trained to give an educational program or certified to provide educational information (e.g., master program volunteers, 4-H leaders, FCE leader-teachers). Support Volunteers include all other Extension volunteers (e.g., advisory groups, committee members, program development committees, office volunteers, field plot volunteers).