

2013 University of Nevada Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

University of Nevada Cooperative Extension (herein referred to as "UNCE," "Nevada Extension," or "Cooperative Extension") works in all five major program areas: (1) Global Food Security and Hunger; (2) Climate Change and Natural Resources; (3) Sustainable Energy; (4) Childhood Obesity, Health, and Nutrition; and (5) Food Safety. Additionally, UNCE is reporting on two state-mandated program areas which include: 6) Human and Family Development and 7) Community and Economic Development. A 2013 progress report on each is briefly described as follows.

GLOBAL FOOD SECURITY AND HUNGER

In its third year of funding, Nevada's Beginning Farmer and Rancher Project (i.e., Herds & Harvests), focused on educational workshops, creating a certification program, and building mentoring opportunities for Nevada agriculture producers, with one-on-one outreach techniques. The program offered 14 educational workshops that reached 137 beginning farmers and ranchers. Each workshop was also provided as distance education via Interactive Television Video. Seven education workshops on the topics So You Want to be a Produce Farmer and Artificial Livestock Insemination reached a total of 86 participants; seven additional workshops, Slaughter Basics I and Meat Cutting Basics I reached a total of 51 beginning farmer and rancher participants. More than 57% of workshop participants reported taking action to make changes in some aspect of their agricultural business based upon the knowledge gained in the Herds & Harvest workshops. So You Want to be a Produce Farmer workshops revealed statistically significant increases in knowledge for all 17 indicators; the top indicators being enterprise budget development and marketing agriculture products for sustainable farming. The Artificial Insemination of Livestock workshop revealed increases in knowledge of 14 out of 21 indicators; the top two indicators being 1) what equipment is needed for artificial insemination to be successful and 2) how to properly care for a semen tank. The slaughter and processing certification classes revealed increases in knowledge in all 15 indicators; the top two indicators being 1) identifying different cuts of meat and 2) the number of cuts of meat from different livestock carcasses.

UNCE's efforts in Risk Management for 2013 included coordinating 55 different producer educational workshops that reached more than 4,000 Nevada producers; these workshops include seven different faculty from UNCE and other colleges. Between 2012 and 2013, agricultural producers increased their participation in Nevada Targeted States Risk Management programs by 12% (from 3,859 participants in 2012 to 4,392 in 2013). Specific topics, and number of participants per topic, in 2013 included: 1) Nevada Crop/Livestock Insurance Options Handbook Update (3,018); 2) Cattlemen's Update (526); 3) Tribal Agriculture, Record-Keeping, and Tax Workshops (59); 4) Cottage Law Update (113); 5) Value-Added Workshops (50); 6) Farm/Estate Transition Planning (26); 7) Business Planning Targeting Women and Hispanic Producers (32); 8) Risk and Insurance Basics for High School Students (470); 9) Nevada Farmer Direct Marketing (32); and 10) Market Systems, Impacts of Dry Milk Wheat (66). Program evaluations administered six months following each workshop reported 100% of participants would attend a Risk Management session again, and 46% felt their operation was more economically viable, and all participants increased their knowledge on the majority of evaluation indicators.

A major area of program emphasis for UNCE is to "improve food security through home and small-scale production." In Nevada, many communities (29 out of 487 census tracts) are considered food

deserts, meaning they have limited access to fresh produce. The Grow Your Own, Nevada program reached 950 total attendees by providing a series of eight, two-hour classes on various aspects of growing and producing food for local consumption. The sessions were offered via Interactive Video to 14 sites across the state reaching up to 100 virtual participants per session. Elko County reported two participants started their own businesses as a direct result of their program attendance. A program website (www.growyourownnevada.com), which is linked to the UNCE website, was accessed by 17,898 visitors during 2013. Participants reported an average of 29.4% to 80.6% knowledge gains. As a result of UNCE programs focused directly on school and community gardens, including three master gardeners volunteering on school gardens projects, three, two-hour sessions reached a total of 80 participants, including high-school aged youth.

Education statewide has evolved from teaching the benefits of diversifying farming operations to include local food production, to educating innovative leaders in the local food industry about production, marketing, distribution (food hubs), business, and processing. The local food educational interest and needs have shifted from considering local food production to requiring information on how to run local food businesses. Areas of concern are how to sustainably feed plants by building soil quality and the use of cover crops or organic matter as well as how to efficiently sale, market, and distribute the product as the amount of product increases.

In Lincoln County, the Community Value-Added Processing program, launched in 2011, was completed in 2013. As an agricultural diversification program, producers involved will increase the production of local vegetables, which will lead to healthy food supplies, farm income, and jobs; in turn, these will all benefit other community members by improving the local economy, increasing consumption of vegetables, and improving overall health. Collaboration with faculty at Utah State helped small processors gain review of new products. The processing authority review was completed or is nearing completion on a variety of processed and raw products. A number of different baked goods were distributed through cottage law. One participant farm successfully washed and packaged mixed lettuce, spinach, kale, mustard greens, and numerous microgreens for sale locally, to a number of restaurant chefs in Las Vegas, and to Whole Foods and other businesses in 2013; upon completion and use of its washing and packaging line in its processing building, the same participant farm built a small test processing kitchen for community use. Six farms are developing a growers' cooperative to better market and distribute products. This group spent much of the year seeking grants for low interest loans for capital start of a food hub. Four hoop house grants were awarded to producers through the National Resource Conservation Service program demonstrating producers' growth and confidence in specialty-crop production. Three participating farms are currently expanding the size of their farm's niche production, with one farm building 8 new hoop houses. The managers of the farms indicated their decision to further diversify is based on the initial successes in production and sales of products resulting from the program's education. Seventeen landowners/managers out of the 110 in Lincoln County have continued their diversifying into new specialty crops. Eleven producers, who participated in the education program, continue to implement their knowledge growing vegetables in 27 hoop houses. During the three years of the grant, nine products were developed and another 12 were in development. The program had 262 direct contacts in 2013.

Burned area revegetation, wildlife habitat restoration, and livestock grazing are the controversial rangeland issues of highest priority in northeast Nevada. Grassroots collaborative approaches to resolution of these issues are gaining momentum in many Nevada communities. For example, the Northeastern Nevada Stewardship Group continued to implement natural resource educational and collaborative stewardship activities, including landowners' forums to learn about sage-grouse habitat and convening local sage-grouse working groups.

Two new collaborative resource stewardship teams formed in 2012 as a result of rancher participation in the Shoesole Resource Management Group, in addition to UNCE's Range Management School. The Home Ranch Team was established because of the ranchers' desire to employ team-led stewardship principles. This team is now participating in each Shoesole meeting, is receiving team input regarding management ideas, and is co-hosting UNCE's expanded annual summer field tour (attended by 40 participants), now incorporating all three ranches. The other team has now adopted the name

Sustainable Alliance of Northeast Elko (SANE), is focusing on sage-grouse habitat enhancement on private land, and has written a management strategy. The teams are dedicated to improving sage-grouse habitat while maintaining ranching tradition and livestock forage sustainability. As a result of these smaller collaborative team approaches to range stewardship, riparian improvements occurred concurrently with a greater than two-fold increase in cattle stocking rates.

UNCE faculty, working in partnership with the Rangelands West Team, maintained and updated an interactive set of web pages in association with the western agricultural experiment stations and National Agricultural Library (<http://globalrangelands.org/rangelandswest>), which includes an interactive page focused on Nevada Rangelands (<http://campusguides.unr.edu/nvrangelands>). UNCE faculty, collaborating with other land-grant university faculty, continued the Rangeland Stewardship and Health Community of Practice for the eXtension project (<http://www.extension.org/rangelands>).

APLU National Diversity Award 2011 recipient, People of the Land, continued to expand in 2013, as large USDA and Department of the Interior settlements made Indian land and tribal government structure a visible priority. The program was expanded to the southwest U.S., with a separate research project for the Hopi Reservation and the Navajo Nation, per request of the Hopi Tribe. In addition, the American Indian business outreach program has been growing with personal requests for training with the Yakima Nation in Washington, the Northern Cheyenne reservation in Montana, and the Confederated Tribes of the Colville Reservation in Washington.

The People of the Land program continues to grow as a national program. WSARE allocated the final funding for the southwest project (\$39,529) for the Hopi and Navajo reservations. UNCE has been working with the University of Arizona, the Hopi Tribe, and the Navajo Nation to complete the internal tribal Institutional Review Board (IRB) to obtain research permits. People of the Land II for the Hopi Tribe is underway, and IRB is still currently pending with the Navajo Nation. UNCE piloted the new curriculum content ideas with the Hopi Tribe and the Navajo Nation to over 68 tribal producers. The curriculum for the Hopi Tribe will be sent out to academic review by May 2014. Due to the uniqueness of the Navajo Nation, UNCE is working closely with the grantor and the tribe to develop strategies and goals.

Workshops in Reno, Nevada (14) and Spokane, Washington (26) were held on American Indian Land Tenure and the American Indian Probate Reform Act dealing with estate planning. UNCE contracted with Indian Land Tenure Foundation to provide legal expertise and taught the Indian land segment. There were two, two-day workshops in Toppenish, Washington (43) and in Lame Deer, Montana (37) this year, under the Indian Outreach programming. Expanding on current and future publications, UNCE has also begun working on economic development activities such as business development, agriculture production, and marketing concepts with Tribes in the Western United States. Many of the reservation participants want basic financial literacy education such as interest rates, monthly budgeting skills, and money management (cash flow) when in business. Participants reported that they increased their knowledge in all nine program indicators based on the workshop content. A fourth printing of the original People of the Land curriculum is currently underway, as more than 4,000 copies have been distributed across the United States.

Current requests include Colville, Washington and a coastal tribe in Washington for business development training, where UNCE teaches the marketing segments of these workshops and works one-on-one with assisting participants in designing a monthly budget. This has led to putting together a collaborative team with Oregon State University, Utah State University, University of Arizona, and University of Nevada, Reno (Cooperative Extension and UNR Center for Economic Development) for additional programming to offer technical assistance in business development to rural reservations in the West.

Eagles and Agriculture promotes the benefits agriculture provides to wildlife and the community, conservation and prosperity of ranching in western Nevada, and enhances participant knowledge in wildlife habitat and local agriculture. UNCE partnered with Carson Valley Chamber of Commerce, Natural Resources Conservation Service, Western Nevada Resource Conservation and Development, Washoe Tribe, Nevada Senator James Settlemeyer, and a number of Carson Valley ranchers to conduct an annual three-day educational event to raise awareness of the relationships between agriculture, wildlife, and community. Approximately 400 people attended the 2013 event. Evaluation results indicate respondents

(n=69) gained a better understanding of Carson Valley agriculture (4.14), have a greater appreciation for the role agriculture plays in providing wildlife habitat (4.00), and have greater understanding for the benefits agriculture provides our society (3.86) (5 point Likert-type scale, 1=strongly disagree; 5=strongly agree).

The Greater and the Bistate sage-grouse are two distinct bird species being considered by the US Fish and Wildlife Service for listing as threatened or endangered. Late in 2013, a decision was published by the Federal Register by the USFWS to list the Bistate population as a threatened species. The decision to list the Greater sage-grouse is not expected until 2015. It is predicted that listing will bring devastating consequences to the agriculture industry and rural economies at large. Sage-grouse conservation plans were developed in 2004 with the assistance of UNCE. Encouraging plan implementation to improve habitat conditions and ultimately increase sage-grouse populations has been the focus of the Nevada Department of Wildlife. In 2013, UNCE conducted 3 meetings with the Bi-State, 2 meetings with the Washoe Modoc Lassen, 5 meetings with the Lincoln County, and 5 meetings with the White Pine Working Groups. Extensive conservation work has been implemented and well documented. Despite overwhelming acclaim for the 2012 Bistate Action Plan, including high praise from the USFWS, the decision to list this distinct species as threatened was rendered. This was not the outcome the Bistate Local Area Working Group had anticipated, considering the extreme amount of thought, deliberation, cooperation, and shared visioning devoted to the problem. However, the USFWS has adopted the Bistate Action Plan, in its entirety, as the species recovery plan that it intends to implement.

Alfalfa and hay are the dominant crops produced in Nevada, and pest control options are limited for the grass hay crops. Additionally, they typically produce low economic returns per acre, which reduces the chemical pest control options for producers who grow these crops. The purpose of the IR-4 program is the increase the number of chemical products available for pest control activities on minor acreage crops. The highest priority issues in the IR-4 program is increasing the available crop protection chemicals for the grain and hay crop teff.

The Walker Basin Project is a collaborative study of the physical and social impacts of outside water purchases on the Walker River Basin inhabitants. UNCE's 2013 responsibilities on the project were related to the establishment and evaluation of several alternative crop species and warm and cool cellulosic biofuel candidates potentially adapted to Western Nevada. UNCE faculty planted and evaluated several species and techniques applicable to the restoration of dewatered farmlands. Two new sites were selected for research work in preparation for planting in 2014. The successful establishment of two research sites in the Walker Basin and information gleaned therefrom have been used to implement revegetation plans in the Walker Basin and Lahontan Valley.

Nevada was awarded the requested Integrated Pest Management (IPM) grant funds totaling \$352,770 necessary to continue IPM programming in Nevada for three more years. The purpose of the IPM program is to educate agricultural producers on integrated pest control strategies that can be employed in place of chemical means. Weed management is the top priority of the Nevada IPM program. UNCE faculty made 16 presentations in support of the IPM focus area at regional and state venues. The EPA approved the use of the herbicide Latigo® on teff hay and grain in 2012 and is the only herbicide currently legal for use on teff, providing growers with the only practical method of controlling broadleaved weeds in the important Nevada crop. As a result of IPM education, virtually every acre of teff grain planted in Nevada in 2013 was treated with this chemical to manage broadleaved weeds.

UNCE Humboldt County collaborated with the Paradise Valley Weed Control District (PVWCD), Nevada First Corporation, and individual land owners to treat noxious weeds on over 4,000 acres.

Approximately one-third of the \$125,000 funds expended were from program enhancements and assistance agreements acquired via UNCE. This effort included a \$40,000 effort to target Russian Knapweed on seven different ranches in Paradise Valley. Prior to this weed identification program in 2002, the annual expenditure by the PVWCD was less than \$2,000 per year, despite annual tax revenue of about \$14,000. Since 2002, annual expenditures have increased 50-fold, exceeding \$100,000 the past four years. Assuming treatment costs of \$50 per acre, annual weed control efforts have expanded from under 40 to more than 2,000 acres per year. Since the weed education and management program was implemented five years ago, the number of individuals receiving certification from the Nevada Department

of Agriculture as Pesticide Applicators has increased more than 130%.

Pesticide Safety Education program training focuses on safe and effective use of pesticides to reduce environmental contamination and harm to applicators and others. Working with Nevada Department of Agriculture (NDOA) staff, UNCE faculty conducted 10 trainings attended by nearly 350 individuals.

Certified applicators pesticide safety manual sets consisting of the Nevada Pesticide Applicator's Certification Workbook and the National Pesticide Applicator Certification Core Manual were distributed to all Nevada Cooperative Extension Offices.

Noxious and invasive weeds are widespread throughout Nevada and threaten the productivity of cropland, pasture, and rangeland. Rural agricultural areas are susceptible to significant adverse economic effects. In 2013, presentations were tailored and given to six different communities by two UNCE faculty. UNCE also initiated a 26-part series published in Nevada Rancher and Progressive Rancher addressing the 25 noxious weeds of greatest concern across Nevada's 17 counties.

The Southern Nevada Research Center and Orchard (the Orchard) was managed by UNCE faculty, who oversaw the staff and volunteers. The Orchard is located in North Las Vegas and contains over 600 fruit trees, grape vines, vegetables, and other row crops. The goal of the facility is to research new varieties of fruit-producing trees, vines, and other plants in sustainable ways. UNCE faculty facilitated 20 hands-on classes at the Orchard in 2013, with an average of 15 attendees at each class (300 total participants). UNCE facilitated a training of an international group of commercial clients from Azerbaijan at the Orchard. More than 1,000 people visited the Orchard to attend classes, obtain produce, and learn what fruits and vegetables they can successfully grow in Southern Nevada. Over 3,200 pounds of produce were sold to commercial clientele and the general public. Over 30 chefs participated in six training classes during the year. The Orchard is the active research center in Southern Nevada for varieties of hops; eight varieties of hops and 70 vines are being tested on location, with evaluation being done at three local breweries. The Orchard is testing more than 150 varieties of fruit trees (500 trees) and over 37 varieties of grape vines (150 vines).

The Greenhouse Project (TGP) includes a commercial-sized greenhouse, 65 raised beds, a 33-foot hoop house, and a small orchard. Its location at Carson High School in Carson City allows strong connections to agriculture/horticulture programs at the school as well as an open accessibility to all Carson City schools. Diverse community partners come together to address food security in the community, job training for youth, and healthy fun out of school, in addition to teaching sustainable gardening and pest control. Special needs high school students have daily classes in the greenhouse. Students and volunteers produced and donated over 4,000 pounds of produce to food banks in Carson City. Student participation, including classes, tours, and juvenile probation work, totaled 3,011 hours. Non-student volunteers donated approximately 1,500 hours. This yielded an in-kind value of \$33,210 to TGP.

Growing In Small Places (GISP) addresses public demand for horticulture information pertinent to urban residents and Community and Healing Garden teaches southern Nevada residents how to grow at least part of their food in a community environment. UNCE faculty worked with the City of Las Vegas and the Las Vegas Parks department to design and develop the new community garden at Floyd Lamb Park at Tule Springs. In 2013, an amendment to the original memorandum of understanding was signed by the City and UNCE to establish this site as both a community garden and a site for teaching neighborhood residents. Development of the Floyd Lamb Park garden was completed in 2013, and the garden will be fully operational in 2014. Due to the great response from the Las Vegas Mayor and City Council, UNCE faculty are currently collaborating with the City of Las Vegas to establish community gardens at City Hall and at the Las Vegas Detention Center.

CLIMATE CHANGE AND NATURAL RESOURCES

In 2013, the Desert Bioscape program had two areas of focus, the continual development of UNCE-Environmental Learning Lab (ELL) and classroom teaching. The Desert Bioscape program takes a holistic approach to the conservation of natural resources in the urban setting. The program goals are to teach homeowners and commercial clientele to conserve water and energy, reduce pesticide and chemical fertilizer use, and promote wildlife habitat in a sustainable manner. Desert Bioscape classes in 2013 had

308 total participants.

Green Industry Training (GIT) consists of eight, three-hour sessions on the topics deemed most important by landscape industry members and prepares new and existing professionals for certification exams. The Green Industry Continuing Education Series (GICES) is a series of monthly seminars that begin the month after initial training and provides continuing education units for profession certification and licensing. Attendance at the GICES program averaged 19 per session (range from 11 to 33 attendees).

Nevada Youth Range Camp (NYRC) participants acquired a better understanding of Nevada's natural resources, range management, the diverse vegetation of Nevada, and the wildlife that depend on these habitats. Since its inception in 1961, hundreds of Nevada youths have participated in the NYRC; the 2013 NYRC had 40 youth participants and 15 adult instructors for the week-long range camp. Each year, camp participants submit a written evaluation, specifying the knowledge they gained from the 13 instructional modules. A formal impact evaluation indicated that students demonstrated an increase in all the knowledge areas taught at NYRC. The evaluation indicated that students gained the most knowledge in the Stream Investigation/Proper Function and Condition of Riparian Areas, with a 34.7% increase between pre-test and post-test results.

For several years, UNCE faculty have led an interdisciplinary and interagency effort to teach the Range Management School (RMS) curriculum, the content of which emphasizes sustainability and to coordinate equal knowledge between ranchers and conservationists, ensuring better forage for livestock and healthy, productive rangelands for wildlife and recreational uses. UNCE faculty presented six sessions on the components of grazing management in northern and central Nevada counties, attended by a total of 332 participants. Another symposium presented in Elko has 85 attendees from at least eight Nevada counties and three neighboring states; another 30 participants connected via video conference at three locations in Nevada and Oregon. A summary of retrospective surveys administered after each workshop showed substantial knowledge gains by attendees.

UNCE faculty and several agency representatives continue to meet monthly as the Carson River Coalition (CRC), which brings stakeholders together to promote integrated watershed management. The Carson River Watershed Education Program educates the public about protecting open space in the hazardous flood zone. UNCE developed a 90-minute symposium called "A Living River Approach to Floodplain Management," which was presented at the 2013 Annual Meeting of the Nevada Water Resources Association and at the 2013 National Conference of the Soil and Water Conservation Society.

UNCE's Living with Fire (LWF) program continued to expand educational materials and teaching activities to help land owners/managers take steps to avoid and prevent catastrophic wildfire. In 2013, LWF distributed 12,329 copies of 17 different LWF publications. Approximately 21,329 online visitors viewed 41 different LWF publications and educational tools (including nine Spanish language publications), four out-of-state requests for parent files to create customized LWF materials were filled, and permission to use LWF content was granted to 12 out-of-state entities. LWF exhibits (I Have a Role and Fire Adapted Communities) were used at six events and generated 715 direct contacts. The Ember House was used at 15 events in six Nevada counties and California involving 4,800 participants. LWF was selected to be one of the programs featured in the University of Nevada, Reno's Carnegie Foundation application. Also in 2013, the International Association of Fire Chiefs, the world's largest professional organization of fire service administrators, chose to endorse and promote LWF materials as part of their nation Ready, Set, Go! Campaign.

In Nevada, approximately 70% of communities are rated as extreme, high, or moderate wildfire hazards. In 2013, UNCE held its Eighth Annual Nevada Wildfire Awareness Week (NVAW), the purpose of which is to recruit and coordinate a variety of resources to promote awareness and action concerning Nevada wildfire issues. The Eighth Annual NVAW resulted in the following: participation from all of Nevada's 17 counties, 124 events held statewide, 2,700 people attending events, 134 entities holding or collaborating on events, all 17 counties issuing proclamations, distribution of 2,600 pieces of education material, and 470 people attending the kickoff event in Carson City.

UNCE, collaborating with University of California Cooperative Extension and 20 partnering agencies, offered its annual Lake Tahoe Basin Wildfire Awareness Week (LTVAW), which provided 18 educational events with an estimated 2,000 participants, including 700 participants at the kickoff event. In 2013, four

LTWAW resolutions were issued by local governments in Nevada and California. The Lake Tahoe Fire Adapted Community exhibit was used at seven events and viewed by 290 people.

UNCE continued its partnership with the Tahoe Regional Planning Agency (TRPA), the Natural Resources Conservation Service, and Conservation Districts in the Tahoe Basin (California and Nevada) to offer its BMP Retrofit/ Environmental Improvement Program addressing the installation of Best Management Practices (BMPs) on private properties at Lake Tahoe. The program drew 68 participants at the 2013 Basic BMP Workshop. An Experience Survey of contractors indicates that, of the 27 participants who responded, contractors who had not attended previous workshops (4) completed an average of one BMP last year, whereas contractors who had attended prior workshops (23) completed an average of 9.4 BMPs. The Refresher Course had 60 participants in 2013. Through the joint efforts of BMP Retrofit partners in 2013, 389 BMP Site Evaluations were performed on private properties, and 516 Certificates of BMP Completion were awarded by TRPA.

The North Lake Tahoe Demonstration Garden has been the site of many presentations in the Basic and Spanish-language BMP Workshops, and this teaching venue has been consistently identified in participant evaluations as one of the strong points of the training.

The Agriculture Innovation Forum Series provides practical information needed for agricultural producers and small acreage owners to optimize their land-use potential and maintain agricultural open space in Carson Valley. More specifically, the forum series offers options and solutions for surviving as a small agriculture entity. A total of four two-hour programs were conducted over six months. Forum topics presented in 2013 included the following: weed management for small acreage, small-scale rabbit and goat production, landscaping for wildlife, and diversity of food crops grown locally. Forum attendance averaged 15 per session in the four forums offered. Evaluation respondents (n=19) indicated they found the forums extremely informative (90%). The majority of respondents (58%) claimed that what they learned in the series had absolutely changed what they will do in the future. Information gleaned from the forum was shared with others by 95% of the respondents. Eighty-nine percent of respondents strongly or somewhat agreed that they have gained the knowledge of how to optimize their land-use potential.

The Alternative Crops program establishes various applied research and demonstration trials critical to the knowledge base regarding potential alternative crop production in Nevada; the information from these trials is used to develop education programs aimed at the commercialization of potentially successful crops. Conversely, crops demonstrating low commercial potential can be identified by UNCE before significant resources are expended by growers in the state. The crops planted and/or evaluated in 2013 included: canola, forage sorghum, sorghum/Sudangrass varieties, forage soybeans, guar, amaranth, tomatoes, hopes, and teff. Productions and forage quality data included 166 separate samples, which were statistically analyzed and ranked for adaptation to Nevada conditions. Approximately 75 people participated in the field days held to increase awareness of the potential of these crops as an alternative to corn silage under low water conditions. Participant evaluations indicated they had increased their awareness and knowledge, have desire to attend future programs, and have an interest in learning more about alternative crops/plants. The field day held for the food-crop trials were evaluated with the same set of questions as the forage crops; results demonstrated high interest in alternative crops and these programs are increasing the awareness, knowledge, and willingness to participate in future alternative crops events.

An analysis was completed of the of the forage needs, current supplies, and potential opportunities for Nevada's forage producers related to the dry milk processing plant being constructed in Fallon by the Dairy Farmers of America Cooperative. The results were presented to local producers at four workshops throughout the state. The workshops were in collaboration with the UNCE risk management program faculty and were held in Fallon, Lovelock, Eureka, and Carson City.

WERA 1013: Intermountain Regional Evaluation and Introduction of Native Plants is a USDA-NIFA multistate, collaborative project that focuses on introduction of new native plant species to the horticulture industry and education for the public about the use of native plants for landscape water conservation. A UNCE faculty member is the founder of the project and an active member. The first five-year lifespan of the project was completed in 2013, and a website was established where information is posted about native species for growers and consumers (<http://www.uwyo.edu/wera1013>). UNCE hosted the annual

meeting for this group in Reno in 2013, which included tours of the Washoe County Extension penstemon garden, a privately-owned native plant garden, and Comstock Seed in Gardnerville. As a direct result of this group, the Intermountain Native Plant Grower's Association (INPGA) has broadened its scope of activities and range of western growers and developed a strategy for stabilizing and expanding the native plant market by establishing the INPGA Intermountain Choice™ program.

The Great Basin Fire Science Delivery Program (GBFSDP), in existence for about three years, is one of 14 consortia across the country. Project information delivered by the GBFSDP comes via multiple media, including a list-serve (newsletter), website, webinars, and synthetic publications. In 2013, GBFSDP team hosted five webinars (>200 attendees). All webinars (current and previous years) were accessed by 1,919 unique viewers for a total of 3,401 visits. On average, there were 154 new visitors and 184 returning visitors each month. The high return rate strongly indicates the project is meeting the research-based knowledge needs of many resource specialists who work with fire, fuels, and vegetation management issues. In its first year of formal evaluation in 2013, evaluation results indicate that GBFSDP is meeting its goal of putting important fire science research in the hands of managers who address rangeland resource issues in the Great Basin. Over 80% stated the information provided enhances their workplace effectiveness, and almost 40% stated the consortium has improved policy regarding fire management in the Great Basin.

UNCE faculty provide evaluation to the national Joint Fire Science Regional Consortia (JFSP) Cluster Evaluation project. JFSP is a federal science organization funding regional fire science networks and delivery consortia nationwide. These 14 regional consortia are comprised of collaborative partnerships between federal and state organizations designed to improve access to and applications of fire science research results and tools. A national e-survey of consortia stakeholders was administered in 2013 (n=366), and a draft report of the data will be published in 2014. Common consortia goals include coordinating current fire science delivery efforts, increasing communication and collaboration between fire managers and fire scientists, and facilitating the dissemination and application of current fire science information among researchers, fire managers, policymakers, and the general public. Each consortium has developed a variety of educational activities designed to improve the linkage between fire science research and application.

Nevada Naturalist programming targets adult learners concerned about environmental issues affected by the impact of the past explosive growth and development of Southern Nevada. The short-term goal for this program is to educate new participants about the natural resources of Southern Nevada. The intermediate goal is to create an educated, sustainable core of volunteers that will benefit the community. The long-term goal is to develop a self-sustaining group to work, teach, and train others about Southern Nevada's natural resources. In 2013, there were 33 full-time program participants, a 26% growth in program participation. The program has graduated a total of 135 Nevada Naturalists. Nevada Naturalists Session One provided 14 classes and 9 labs, 3+ hours each; Nevada Naturalists Session Two provided 15 classes and 8 labs, 3+ hours each. UNCE faculty also conducted seven classes on reptiles, arachnids, rattlesnake relocation, and venomous reptiles to nearly 300 students.

SUSTAINABLE ENERGY

UNCE faculty completed a series of cellulosic biofuel field experiments, providing the only source of replicated data in Nevada regarding production of cellulosic biofuels and oil crops. The results of these experiments of nine cellulosic biofuel trials demonstrated conclusively that, while yields obtained from both cool and warm season grasses were relatively high, this production came only with maximum applications of water and regular fertilizer applications. These high input costs and low product values demonstrated that this project provides solid evidence precluding economically viable production of cellulosic biofuel products in northern and western Nevada. This information is extremely valuable for anyone contemplating an investment in commercial production cellulosic biofuels in Nevada. Formal evaluations of pre- and post-test scores measuring knowledge increases in response to the question "How to decide if cellulosic biomass is a potential alternative crop" revealed a statistically significant increase following educational workshops in Pershing County (pre= 1.43, post= 3.43, 5 point scale) and in Churchill County

(pre = 1.75, post = 4.00). Additionally, UNCE faculty presented the results at the 2013 American Society of Agronomy, Crop Science Society, Soil Science Society annual meeting.

UNCE faculty collaborated with Nevada producers in identifying High Value, Low Water Use Crops with the potential of biofuels that can be produced as alternatives to hay production. A second priority is developing revegetation techniques and identifying adapted perennial plant species that can be used to reclaim abandoned farmlands in Nevada. Canola trials results have been statistically analyzed and a preliminary report and fact sheet is in preparation. Public demand has increased seven-fold for information on canola production techniques.

Sustainable Living Renewable Energy Roundup is a local non-profit designed to promote sustainable practices, renewable energy use, and environmentally-responsible lifestyles. In 2013, UNCE collaborated with this non-profit to provide the public with a Green Living Festival, a dinner of local foods, and energy challenge. UNCE faculty coordinated 13 speakers for the Green Living Festival, which presented topics including sustaining our rural character through conservation easements, build your own hoop house, geothermal heat pumps, backyard fisheries, and making your own household products. Approximately 300 attended the single-day event, which consisted primarily of the general public. More than half (53%, n = 24) of the respondents who completed evaluations of the educational event indicated they planned to make changes in the way they live, play, or work as a result of what they learned at the Festival. Some of the changes included improving winter growing techniques, installing solar panels, purchasing an electric bike, recycling, buying local, and examining wells and leach fields.

CHILDHOOD OBESITY, HEALTH AND NUTRITION

All 4 Kids takes a multi-dimensional approach to childhood obesity targeting preschool children, their families, and their preschool center teachers. The program includes a 21-lesson or 24-lesson classroom curriculum that incorporates learning activities, music, and dance to teach preschool children about nutrition, physical activity, and the importance of accepting that children come in different shapes and sizes. In addition, separate, facilitated discussions are conducted with parents and staff to enhance their understanding of these issues in their child's development and how these issues impact their own behavior. All preschool center staff involved in the project attended training to teach them how to help children become healthier and more active. Outcomes for 2013 include statistically significant improvements in participants' abilities to perform 12 fundamental movement tasks and an increased preference for healthy snacks. In 2013, 790 preschool children and 353 parents participated in the All 4 Kids program, for a total of 1,143 participants (583 Hispanic, 353 African-American, 188 Caucasian, and 19 Asian/Pacific Islander). The 2013 program, which consisted of 47 (21- or 24-week) sessions (1,053 total lessons) and 35 family events, was taught at six different childcare sites.

In 2012, All 4 Kids received the USDA National Institute of Food and Agriculture (NIFA) Partnership Award for Mission Integration of Research, Education or Extension; USDA-NIFA National Jeanne M. Priester Award for a statewide/multistate; Western Extension Directors Association Award (WEDA) of Excellence - Multistate research; Family Health and Wellness Award, 3rd place National Award, National Extension Association of Family and Consumer Sciences; Family Health and Wellness Award, 2nd place Western Regional Award, National Extension Association of Family and Consumer Sciences; and Florence Hall Award, 3rd Place Western Regional Award, National Extension Association of Family and Consumer Sciences. Following this award-winning year, and in an effort to expand direct teaching and produce greater impact on parent education in the All 4 Kids programming, the 2013 program proliferated into new, pilot programs, including the All 4 Kids - Family Style Program. Instead of the initial programs taught to preschoolers at preschools, the Family-Style Program is taught at community centers for both children and parents. Classes for parents mirror the concepts taught to the children. The content includes materials from the Teacher and Family Connections Supplemental Curriculum. The 2013 pilot, Family-Style Program had 51 participants.

UNCE faculty held the second-annual All 4 Kids - Healthy Kids Festival in 2013, which created culturally-sensitive awareness during Childhood Obesity Month (September). There were 1,494 participants (571 adults, 797 children). More than 40 community partners participated as education

vendors, including nutrition education, physical activity, growing fruits and vegetables, healthy food tasting, music and dance instruction, BMI and health assessments, city/county recreation, sports, and outdoor venues.

As the Nevada Project Leader for Generating Rural Options for Weight-Healthy Kids and Communities (GROW), UNCE faculty partnered with Oregon State University and six other extension services across the Western Region to engage rural communities and individuals in Community-Based Participatory Research (CBPR) efforts and a HEAL MAPPS (Healthful Active Living - Mapping Attributes: Participatory Photographic Survey) GPS mapping mechanism to assess features of rural communities viewed as obesity-preventing or obesity-promoting. Community resources are surveyed for readiness to implement and support environmentally-based obesity prevention efforts. Completion of this project will allow UNCE to understand the obesogenic environment of rural Nevada communities, which is critical to curbing obesity rates.

Healthy Steps to Freedom (HSF) is a healthy lifestyle program designed to augment existing broad-based drug prevention and community education programs for women and girls under correctional supervision. Some common health and nutrition concerns associated with stimulant and other illicit drug use include poor dietary practices and lack of family meal planning, inactivity, extreme weight gain during recovery, body image dissatisfaction and disordered eating patterns, poor hygiene, and mental health issues. HSF, a complete health and wellness program, is a viable option for implementation in substance-abuse recovery interventions. Healthy lifestyles are taught as an alternative approach for weight loss and desire for increased energy, including physical activity and nutrition aimed at teaching healthy lifestyle behaviors; resistance exercise and calcium intake (to counteract the bone mineral loss caused by chronic methamphetamine use); and educational programs to help identify and address body image issues, disordered eating patterns, and poor lifestyle practices. The UNCE HSF team taught 599 participants in 2013: 296 clients completed the program, 261 clients partially completed the program, and 42 are currently enrolled. While substance-abuse programs are generally known for low attrition rates (35% typically reported in literature, HSF retained 53% of participants. The HSF team conducted 42 program sessions (9-14 weeks) in 10 facilities, totaling 482 weekly classes. Patients reported increased learning, increased healthy behaviors, increased intuitive eating patterns, and less body dissatisfaction following program participation. On a whole-course evaluation rating scale of 1-5, with 1 being "not useful" and 5 being "very useful, the total score for the program post-test assessment was 4.85 (n=131).

UNCE faculty participated in a Multi-State Obesity Project W-1005: An Integrated Approach To Prevention Of Obesity In High Risk Families. The objective of the multi-state USDA research-extension project is to research factors that help low-income families with children ages 4 to 10 maintain healthy weights rather than looking for what caused their overweight status. UNCE faculty also hosted the 2013 W-1005 annual meeting in Las Vegas in November.

A total of 397 youth in southern Nevada participated in the Anahuac program; ages of the participants ranged from 14 to 19. Anahuac focuses on the importance of eating Mesoamerican fruits and vegetables as a way to reconnect with indigenous traditions and culture of the target audience, Latino youth, and living an active lifestyle. The program teaches Latino students the healthy lifestyle of their indigenous ancestors and emphasizes that unhealthy eating and other unhealthy behaviors are not part of their culture. By teaching Latino students the contributions their indigenous ancestors have made to the world in the fields of science, math, and agriculture, students improve their self-identity, academic aspirations, and engage in healthy behaviors. After the program, participants demonstrated improved health and nutrition knowledge and were significantly more likely to identify plants that were domesticated by Mesoamerican people. Additionally students were more likely to respond correctly to 9 of the 11 health and nutritional questions which included questions to measure student's knowledge of portion size, recommended dietary intake, and physical activity guidelines.

UNCE faculty taught Breast Feeding Basics (BFB) to 471 health care professionals (including 110 nursing students and 304 staff at hospital maternity units) and 242 community members. Learners indicated an increase in knowledge of understanding the benefits of breastfeeding, an increased likelihood of talking to parents about breastfeeding, increased understanding of the link between frequent nursing and milk production, and increased confidence in breastfeeding support, promotion, and protection.

Mom's Special Gift(MSG) received a total of 883 referrals (91% from UMC, the Clark County hospital) with 265 women being unreachable (phone disconnected, wrong numbers, etc). MSG's staff educated 488 women over the phone and followed them on a monthly basis until breastfeeding stopped or up to six months. MSG staff conducted a total of 16 in-person individual sessions, and 24 participants received prenatal breastfeeding education. In addition to telephone and in-person educational sessions, MSG's two lactation educators (both bilingual) conducted breastfeeding classes at two local WIC sites: 108 classes comprised of 721 women. MSG staff conducted an additional 4 community classes and 11 school classes. Over 9,500 MSG fact sheets were requested by 6 community agencies to be distributed to pregnant and breastfeeding women. An unknown amount is printed by partners who have requested an electronic version to enable them to reproduce the series themselves.

Chefs for Kids (CFK) is a nutrition education program for primary-grade children in high-needs elementary schools, supported in part by the Adventures with Chefs for Kids Chefs of Las Vegas. High-needs schools are defined as those having 50% of students eligible to receive free or reduced-price lunches. CFK provides the nutrition education program to 24% of eligible schools in the Clark County (Las Vegas) School District (32 of 133) and 9% of eligible schools in the Washoe County (Reno) School District (3 of 34). The first-grade curriculum introduces the concept of food groups to children with a six-part program. A variety of teaching methods are used to ensure children of all learning abilities will be able to achieve. In 2013, first grade students (n=2,086) achieved an average score of 6.1 on the pre-test and an average score of 8.07 on the post-test, a statistically significant improvement ($p < .0001$).

Chefs for Kids' Intensive, second-grade curriculum (Food for Health) is a weekly program that focuses on the origin, use, and need for food, as well as on physical activity practices that engender lifelong, healthy lifestyles in children to lower their risks for developing obesity and chronic diseases. A total of 1,216 second-grade students were assessed for hand washing skills; of those tested, 84% responded with no errors. A total of 1,234 second-grade students were assessed for their knowledge of activities that would be considered part of an active lifestyle (activities that get the body moving). Over ninety percent (91.5%) of students were able to list two activities that would be considered part of an "active lifestyle." Another 7.5% could list one activity that would get them moving. Only 1% of students could not list any activity that would be considered part of an "active lifestyle." Average food categorization score was 94%. The snack behavior assessment yielded 1,061 paired tests. Results showed that, before the program, 318 students (30%) chose three snacks rated as less healthful; following the intervention, only 75 students (7%) chose three snacks rated as less healthful ($p < .0001$). Second-grade students improved their average score from 21.3 on the pre-test to 26.8 on the post-test indicating that snack choices improved significantly by one healthy snack ($p < .0001$).

Nevada continues to have a high birth rate (live births/1,000 population) in teens 15 to 19 years old (13.9 versus 12.0 nationally). Working in high schools and community agency programs, UNCE's Nurturing Partners program facilitates changes in attitude, knowledge, and practice of adolescents and young adults regarding general nutrition and health, specific issues of pregnancy and breastfeeding, and parenting guidance. In 2013, a total of 795 students (48% female) were taught in 172 sessions at 1 school and 1 community site. Nutrition lab (cooking) classes were offered quarterly. Significant increases in nutrition knowledge (pre-test scores 14.1 and post-test scores 22.2) were noted at one school and one community site.

Eat Smart Live Strong combines nutrition and horticulture education to help seniors enhance the flavor of the commodity foods they receive and, thus, increasing the chance that the commodity foods will be consumed and will improve the nutritional health of these seniors. While a total of 62 seniors attended some or all of the 23 classes, 53 seniors completed the pre-test and 29 seniors completed both the pre- and post-test evaluations. The program achieved a highly significant improvement in the number of people who used the nutrition label on foods. Fewer people reported running out of food at the end of the month. Participants showed a statistically significant improvement in their self-reported happiness (a recognized indicator of overall well-being).

Healthy Eating on a Budget provides direct nutrition and food resource management education to recipients of Nevada Department of Welfare and Social Services (DWSS) benefits at DWSS locations. Nutrition and benefit resource management education is also provided to DWSS recipients and

those seeking assistance through a UNCE website link on the DWSS website. In 2013, Healthy Eating on a Budget provided education through direct education classes at DWSS locations and through the DWSS website via the UNCE SNAP-ED website link; the program reached 117 participants with 484 family members affected directly by programming. The race/ethnic breakdown of the participants was 19% Caucasian, 50% African-American, 1% American Indian, 3% Asian/Pacific Islander, and 27% Hispanic.

Initial results from an internet access survey (n=83) showed that 65% have regular access to a computer, 66% have access to the internet through a smart phone, 69% reported having internet social media accounts (i.e., Facebook), and 97% requested to receive additional nutrition information via social media following classes. For this reason, UNCE developed the program Facebook page and made improvements to the UNCE SNAP-ED website link.

Calcium, It's Not Just Milktrain-the-trainer program partners with middle-school health teachers to teach a week-long curriculum to students. The goal is to increase awareness, knowledge, and skills among the target audience (11- to 14-year-old middle-school students) related to increasing consumption of calcium-rich foods. The program continues to expand through attracting new schools, while continuing in many other schools; however, because of funding limitations, only a limited number of schools can participate in the program each year. As the program continues to increase, funding has forced UNCE to restrict the program to schools who sign up swiftly. This year, the program was taught both spring and fall semesters at 11 middle schools to 2,513 students; the majority of the students reached through this project were from underserved groups, with an average of 77% of students receiving free or reduced-price school meals. With all schools combined, results of the pre- and post-test evaluation (n=2,513) showed significant improvements on all questions from pre- to post-test the core curricular concepts related to a) their knowledge and understanding of calcium and growth, bone health, distribution of calcium in the body, importance of physical activity, and disease prevention; b) their knowledge of the calcium intake recommendation for their age group; c) their ability to identify calcium-rich foods; and d) their ability to interpret food labels to identify calcium-rich foods. One outcome of particular significance was related to the curriculum modifications made by UNCE faculty, where more emphasis was given to the importance of weight-bearing physical activity on bone health, which resulted in a 13% increase in correct responses on the post-test from the 2012 results (71%) to the 2013 results (84%).

Food for Health and Soul and Cocinando Delicioso Y Saludable programs address chronic disease incidence in the African-American and Latino/Hispanic communities. The program uses the experiential teaching method using a variety of teaching techniques to teach families how to modify recipes for better health by decreasing sugar, fat, and sodium, while increasing fiber. In 2013, a six-class series was taught 39 times by groups of paraprofessionals. The 2013 classes were conducted at 33 community locations including churches, libraries, public- housing complexes, childcare centers, schools, and recreation and community centers. Pre-assessment data were collected from 300 participants, post-assessment data was collected from 235 participants, and post-post-assessment data was collected from 59 mailed responses. Results showed that participants reported making healthier choices after the conclusion of the program, and continued to make healthy choices three months after the workshop ended. Data from both programs showed an overall trend toward positive behavior changes regarding fat and fiber and sodium intake among participants. The items relating to fat and fiber intake experienced a progressive change from unhealthy tendencies toward healthier choices and behaviors from the pre- to post-assessment. The same can be said for the behaviors of participants of the post- and post-post assessments. Furthermore, the items relating to salt and sodium intake also displayed an increase in positive behaviors from the pre- to post-assessments, and respondents continued to maintain healthier choices three months after completing the program (post-post assessment).

The federally-funded Expanded Food and Nutrition Education Program (EFNEP) provides education to limited-resource families in three key areas: food resource management, nutrition, and food safety practices. Federal law requires that EFNEP target its programming efforts toward limited-resource families, as low-income families are the most vulnerable to both under-nutrition and over-consumption. Nevada's EFNEP plays a critical role in bringing nutrition education to families most in need, in a practical, hands-on, applied way. EFNEP classes were taught individually as well as in groups (eight, 90-minute classes per series) at 34 schools and 13 community locations in low-income areas in southern

Nevada. Nevada's 2013 EFNEP program reached 791 participants with 3,409 family members affected indirectly by the programming efforts. The race/ethnic breakdown of the participants was 66% Hispanic, 21% Caucasian, 6% African-American, and 7% other. While 67% (n=791) of these participants indicated that they had incomes at or below the poverty level, 22% did not indicate their income level on the evaluation forms. Following the program, 99.4% of participants (n=574) improved their diets in at least one dietary intake area (fruits, vegetables, whole grains, etc.), 92% showed improvement in one or more nutrition practices (plans meals, prepares food without salt, reads nutrition labels, etc.), 86% stretched their food dollars further, and 73% handled food more safely (thawing and storing foods properly).

UNCE faculty participated as active members in the multi-state USDA research extension project, NC2169 (formerly NC1169): EFNEP Related Research, Program Evaluation, and Outreach team (which includes members from 20 states). The group continued to pursue the development of a simpler, more accurate and cost-effective evaluation to measure dietary behavior change among EFNEP clientele. Two objective groups, led by UNCE faculty, spearheaded efforts to pilot a new web-based automated 24-hour dietary recall instrument (ASA24) with EFNEP participants.

Little Books and Little Cooks is a 7-week parenting education program for preschool-age children (3 - 5 years old) and their parents designed to promote healthy eating, family literacy, parent-child interaction, and child's school-readiness skills. During the program, children and parents learn about healthy eating and nutrition, gain positive parent-child interaction skills, and practice school-readiness skills (cooking and preparation skills) by reading children's books about healthy eating/nutrition and cooking/eating every week. Each weekly session features a new book about healthy eating and a new recipe. Children showed an improvement in cooking skills (e.g., measuring ingredients, cutting soft foods, washing hands for 20 seconds, etc.). The participant children (3 to 5 years old) showed significant increase in average scores for 15 cooking skills; were more likely to eat fruits or vegetables if served; and showed less picky eating (e.g., children tried different types of foods or new foods) during mealtimes. By the last day of the program, parents were more likely to report that their children became less picky eaters. The program achieved significant improvement in positive parent-child interactions during cooking. After participating in the program, parents were significantly more likely to report that they cooked more often for their families and cooked more often with their children. Parents were significantly more likely to report that they consumed more fruits and vegetables after completing the program than before completing the program. Parents were more likely to be encouraging when feeding their children after attending the program than before attending the program. At the last day of the program, 85% of parents and children understood how to match each food with the food group to which it belongs, and 90% of parents and children mastered proper hand washing.

Nevada Radon Education program distributed 5,181 test kits; of those kits distributed, 2,223 kits were used (43% usage rate). In 2013, the radon website had 49,671 visitors who downloaded 55,449 pages of information; this reflected an increase of 20,152 visitors and an increase in 17,369 downloaded pages over the previous year. In 2013, the radon staff fielded at least 2,279 phone calls with radon inquiries and had direct contact with 8,753 people.

FOOD SAFETY

UNCE faculty established programs to improve food safety education in the state of Nevada. This program is being developed specifically to target Nevada's increasing number of small-farm operators, value-added food industry, and hydroponically-grown fruits and vegetable industry. UNCE faculty partnered with Nevada Department of Agriculture and USDA inspectors to collaboratively develop an Extension program to improve small farmers' Good Agricultural Practices (GAPs) and Good Handling Practices (GHPs) through education, planning, and voluntary on-site audits. UNCE faculty with a background in Plant Sciences implemented and led this program initiative. The first year of this initiative resulted in two trainings in 2013, where growers in Nevada were provided education and assistance regarding implementing GAPs in their production systems, for a total of 167 direct contacts. One-on-one technical assistance was provided to several fruit and vegetable producers in the State, both in-person and electronically. UNCE is currently writing curriculum for GAPs in Nevada, with publication anticipated in

2014.

HUMAN AND FAMILY DEVELOPMENT

Census data indicate that Nevada's rural communities have some of the highest rates in the nation regarding the issue of youth having difficulty transitioning to the workplace/adulthood. The cumulative 5-year evidence of Bootstraps (a recognized National Registry of Evidence-based Program and Practice) participants' impacts includes statistically significant improvements in knowledge gain and behavior change on short, intermediate, and long-term measures. Since the intent of the program is to create change among young adults who are neither in school nor working, the program dictates a small participation rate to provide the intensity of programming needed to create change. The 72 participants who completed the program were significantly more likely to report having greater efficacy in completing tasks related to job safety. Participants showed a significant improvement in: life skill scores; knowing at least two ways to save money; understanding how to get the job they want; preparing for work properly; complete their jobs properly; having a positive attitude and clean appearance; demonstrating better teamwork skills as rated by their job coaches; and having good problem-solving and decision-making abilities, better communication skills, leadership skills, and health habits. Participant interview data revealed important changes from the beginning to the end of the program. Specifically, participants expressed changes in acceptance of responsibility for their current situation and future direction, a recognition and willingness to use community resources for help, and ability to take pride in their work.

The 2013 Battle Mountain Bootstraps program enrolled 18 youth, one job coach, four crew leaders, and one BLM policy manager for six months. Fourteen participants were evaluated by the job coach, indicating that participants showed significant increases in both life skills and job readiness on a short-term measurement.

Project MAGIC(Making a Group and Individual Commitment), for first time juvenile offenders, is recognized as a National Registry of Evidence-based Program and Practice. In 2013, a total of 127 youth and their parents participated in the program and completed both the pre and post-survey. This award-winning program continues to be a viable option for juvenile offenders and their parents, each of whom attend multiple class sessions. Cumulative impacts (over 4,000 families) of this evidence-based program are available at: <http://nrepp.samhsa.gov/ViewIntervention.aspx?id=193>.

Keeping Kids Safe: Recognizing, Reporting and Responding to Child Maltreatment educates trainers, youth workers, volunteers and childcare providers about recognizing, reporting suspicions, and responding to disclosures of child abuse, all of which can help decrease the incidence of maltreatment, reduce the impact of abuse on children and families, and provide families with support to do a better job of parenting their children. In 2013, UNCE twice taught the Keeping Kids Safe curriculum to childcare providers, youth workers, and 4-H volunteers in Elko County. Youth workers, program directors, and childcare providers accessed the program self-study guide (Kids Deserve a Safe Place to Grow). Eighty-two percent of the program participants increased their knowledge about recognizing and responding to child maltreatment.

UNCE faculty served on the three-member national leadership committee for the eXtension Alliance for Better Child Care Community of Practice, gathering Extension classroom teaching materials from across the country and posting them to the website database to provide classroom activities (<http://www.extension.org/child%20care>). UNCE faculty participated in regular web meetings; served as a primary content reviewer for new articles, teaching resources, and FAQs; added 24 new songs and finger-plays to the searchable database; and served as the evaluation contact for the CoP. Google Analytics indicates that the most visited aspects of the website continue to be information on child development, creative art, and child self-help skills, as well as the searchable databases of classroom activities, story-stretcher ideas, songs, and finger-plays. The website continuously averages well over 10,000 page views per month.

Just in Time Parenting is a national eXtension program designed to reach parents at the critical moment with research-based information about pregnancy, parenting, child development, health and safety, nutrition and the prevention of childhood obesity, school readiness, and couple relationships. Parents have the option of accessing the newsletter online (<http://www.extension.org/parenting>) or

serve on the evaluation subcommittee, which consists of specialists from eight other states. Google Analytics indicated a total of 111,057 visits with 335,984 page views from 75,969 unique visitors residing in 150 different countries.

The Child Safety/ Welfare Parenting program helped parents acquire and internalize parenting and problem-solving skills necessary to build a healthy family and to further prevent child abuse and neglect. In 2013, 40 individual sessions (10 programs x 4 weeks) were taught for 99 parents (91 Hispanic, 3 African-American, 3 Caucasian, and 2 Asian) and 265 family contacts. Of the 57 parents who completed the post-test questionnaire, 98% of parents thought the program was very helpful and the mean score was 4.98 (5-point Likert scale); 93% of the parents would recommend this class to their friends or family; 75% of the parents answered correctly on more than four (of five total) questions; and 84% of the parents attended more than three classes (68% completed the program).

Fun to Play program teaches parents to foster the cognitive, physical, social, and emotional well-being of children. An especially important part of play for young children is play with parents; however, a recent report (Byron, 2010) indicated time-starved parents have forgotten how to play with their children and do not know how to initiate creative and imaginative activities. Fun to Play offered 128 individual classes in 2013 (16 program series x 8 weeks) to 283 families (286 parents and 320 children) After completing the Fun to Play program, parents' understanding about pre-k standards increased significantly, from 4.10 point to 7.50 point (n=88, a scale ranging from 0 to 10).

Family Storyteller is a multi-faceted literacy program aimed at increasing the amount and quality of time parents and young children spend together in literacy-enriching activities. The program targets those families with infants, preschoolers, and beginning readers who may have limited language skills and few children's books at home. Overall, the program effected positive changes in parents' reading to their children and doing literacy/ language activities with their children. Parents made statistically significant gains on all 12 essential strategies, such as using expression during the read, pointing to pictures and words, asking expansive questions about the story, and building vocabulary. Parents engaged children in an average of 23.1 out of a possible total of 27 (86%) suggested literacy and language activities in the home during the course of the session; across all 195 participating families, that works out to a total of 4,505 parent-child literacy and language activities that, otherwise, likely would not be done at home. Additionally, on a scale from 1 (very little) to 5 (very much), by the end of the series, parents reported feeling confident that they could use the skills they learned in the workshops to teach their children (M=4.79), confident that they could help their children succeed in school (M=4.69), prepared to help their children learn (M=4.42), and believed that their children could learn from them (M=4.84). The UNCE-developed curriculum for the original Family Storyteller version for English speakers continues to be used and taught in other states.

Heart and Shield is a rural domestic violence prevention program in Churchill and Elko counties that focuses on the training of law enforcement, community leaders, advocates, victims, and families to identify and report domestic abuse, which is critical to preventing family violence. In 2013, the programming was expanded to include youth domestic violence prevention education. At the end of the two-day law enforcement training session for the Fallon Paiute-Shoshone Tribe officers and advocates, 16 attendees completed a pre-post evaluation survey; of the 23 questions posed, 20 revealed statistically significant increases in participant knowledge, attitude, and behavior change. Respondent answers showed an increase in feeling prepared to respond to a domestic violence dispute, an increase in feeling prepared to approach a domestic violence scene safely, and an increase in feeling that their response to a domestic violence situation can make a difference in the life of the victim.

The state of Nevada received federal funds, which were awarded to four school districts, including the Clark County (Las Vegas) School District (CCSD), which, in turn, awarded its funding to UNCE for the community literacy piece. UNCE utilizes this funding for its Striving Reader Comprehensive Early Literacy Program, which has four main program components: Literacy Coaching at community childcare sites, pre- and post-assessments of Early Language and Literacy Classroom Observation (ELLCO) in preschool classrooms, providing the coursework for the Child Development Associate credential of professional development hours to CCSD assistant teachers, and offering the Family Storyteller program at 26 elementary schools and 16 childcare centers.

COMMUNITY AND ECONOMIC DEVELOPMENT

Stronger Economies Together (SET) helps people in rural communities work together as a regional team to develop and implement an economic development plan that builds on the current and emerging economic strengths of their region. The first Nevada SET project was developed in 2012 and undertaken in the nine northern Nevada counties (Carson, Churchill, Douglas, Lyon, Humboldt, Pershing, Mineral, Storey, and Washoe) comprising the Western Nevada Development District (WNDD). The Governor's Office of Economic Development (GOED) funded this planning effort with a \$50,000 grant. The primary partners included GOED, WNDD, UNCE, and USDA Rural Development. A vision for economic development in the region was crafted along with five economic sector and four capacity building goals. A regional economic development blueprint was developed; this blueprint was implemented through small working groups in 2013 and will eventually evolve into a comprehensive economic development strategy for the region. Other significant outcomes included the networks and relationships built within the region, as well as the keen appreciation for a regional approach to economic development. The SET program continued in 2013 with subsequent issue-based workshops focusing on the development and implementation of county/regional Economic Development Strategic Plans. There were three, one-day workshops that reached 319 total direct contacts. Content during these workshops focused on understanding economic development opportunity issue(s), building strategic direction and consensus among working groups, and developing county/regional action plans. In addition, the five targeted industry and capacity building platforms assembled in 2012 continued to function in 2013. These subgroups met outside the formal SET program times to work on specific or emerging economic development issues that have regional implications. Each of these subgroups contributed and shared work during formal SET workshops.

Ninety-five percent of Nevada businesses are considered small by having fewer than 20 employees. Under this definition, approximately 45% of Clark County's workforce is employed by a small business. The importance of small businesses to Nevada's economy is why the Business Opportunity and Workforce Development (BOWD) program was implemented under the Strategic alliance for emerging Small Businesses (SafeSB) that includes a working partnership between public, private, and nonprofit entities. The primary goal of the BOWD program is to introduce small businesses in Clark County to local government procurement opportunities using a 12-session, 3-hour class curriculum. In addition, each participating business is required to meet three times with instructors individually outside of class to receive specialized business counseling. As a result of this program in 2013, 115 businesses (100%) directly contacted, by email and/or phone, county departments that may require their products or services; 115 businesses (100%) prepared and distributed to county departments a one-page statement of qualifications; 38 businesses (33%) that completed the BOWD program have submitted a formal or non-formal bid to Clark County; and 18 businesses (47%) that submitted a bid to Clark County received a contract. In 2013, over \$1.5 million was awarded by Clark County to recent graduates of the BOWD program; this is an average of approximately \$83,333 per awarded contract. These contracts have also created approximately 50 new jobs because of business expansion to meet newly created demand. Using a multiplier of 1.8, it is estimated that this program, during 2013, had a total economic impact on Clark County of over \$2.7 million and supported 90 total jobs.

The Western states of Nevada, Hawaii, and Montana, under the Western Rural Development Center, have worked together under a regional Cooperative Extension Project titled Area Sector Analysis Process (ASAP). ASAP helps communities focus economic development efforts to diversify local economies via procedures deriving desirability and compatibility indices. Desirability measures how much businesses match the development goals of a community or region. Compatibility measures how a community or area meets the demands of businesses. Derivation of desirability and compatibility indices allows a community or region to target desired industries and/or community/regional resource developments to meet business demands. ASAP results have been applied by UNCE faculty to Bullhead City, Arizona; Laughlin, Nevada; and Lander County, Nevada. A train-the-trainer program on ASAP was presented for the Western Rural Development Center (WRDC) in 2013. Extension faculty from Utah, Minnesota, New Mexico, and Alaska

attended the train-the-trainer workshop. Also, in 2013, the ASAP team was notified that its proposal was accepted by the National Research Initiative of the USDA. Additional expansions of the ASAP model and its applications are planned.

Leadership Douglas County(LDC) consists of 11 days, 1 day per month, of leadership skill building, networking, focusing on critical community issues, and learning about many important aspects of the county. This program is designed to develop informed, involved, and knowledgeable community members for Douglas County. The program creates community leaders from all walks of life by focusing on the Douglas County community's leadership needs, history, values, members, strengths, and issues. In 2013, 168 community leaders and business and organization representatives were involved in LDC throughout the year. Fourteen participants were enrolled in the 2013 class. LDC met 100% of the candidates' expectations (n=14) and exceeded expectations by a mean of 6.1 on a scale of 1 to 7. Sense of commitment to the community was increased in the minds of 93% of the class. About two-thirds of the candidates (64%) increased their community leadership activities over the course of the 11-month program. One hundred percent of the class felt they have a better sense of applying their background, skills, and passions to leadership in Douglas County issues, 100% to leadership in their professional life, and 93% to leadership in their personal life. The majority of the class foresaw their leadership activity changing in the future as a result of LDC.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	21.5	0.0	0.0	0.0
Actual	37.7	0.0	0.0	0.0

II. Merit Review Process

1. The Merit Review Process that was Employed for this year

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

2. Brief Explanation

As outlined in the plan of work, UNCE's annual merit review process comprises multiple steps. In January of each year, UNCE faculty are required to prepare a Role Statement detailing their teaching, research, and service activities for the coming calendar year. Extension faculty review their individual Role Statements with their Area Director and/or Department Chair, who ensures that the quality and relevance of planned programming efforts effectively address formally identified program goals. Both the respective Area Director and the UNCE Dean/Director must review and approve the plan.

Annually, UNCE faculty evaluate their peers' teaching, research, and service activities to assess overall performance and program quality. Faculty consider the results of published needs assessments, programs developed in response thereto, and the substance of documented outcomes and impacts in numerically rating peer-performance and providing narrative feedback. Area Directors also conduct an

annual review of faculty performance and provide numerical ratings and narrative feedback. Area Directors then meet individually with faculty to discuss the review findings. The UNCE Dean/Director also reviews and formally approves the evaluation documents.

Upon request, faculty representing land-grant institutions in other states provide formal reviews of UNCE faculty applications for promotion and tenure. These reviews are included in the application packet and considered by the promotion and tenure committees at the area, college, and university levels.

Programs' outcomes and impacts are reviewed by a Non-university, External Panel (State Extension Advisory Committee). This review provides an additional source of needs-assessment data from key representative community and industry stakeholders.

Extension publications undergo a blind, peer-review process involving internal and external university faculty in order to improve and ensure quality publications. Additionally, several UNCE faculty contribute specialized program content to eXtension Communities of Practice (CoP). Subsequently their program content is reviewed as part of the eXtension CoP selection process.

Finally, some Cooperative Extension efforts are a part of the Multi-state Review Committee (MRC) process and are documented, reviewed, and approved by the sponsoring regional association. MRCs are responsible for the review, evaluation, and recommendation of all aspects of western multistate programs which may involve research, academic programs, extension, and/or international programs.

III. Stakeholder Input

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

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

Brief explanation.

Use of local newspapers and radio, through public-service announcements, encourage stakeholders to participate in public meetings and listening sessions. In 2013, UNCE also used paid advertisements in Edible Tahoe-Reno quarterly to specifically target the increasing number of small and urban farm operators, CSAs, and their clientele. Faculty target traditional and non-traditional stakeholders through email and postal mail invitations to participate in public meetings, focus groups, and individual interviews. Poster announcements are placed in public places frequented by traditional and non-traditional audiences.

Formal needs assessments serve as another means for contacting stakeholders. Faculty continually assess stakeholders' perceived program priorities in order to efficiently allocate resources and to identify and develop partnerships for program implementation and delivery.

Primary data-collection methods include postal mail and internet surveys, focus groups, and individual interviews. Results of Cooperative Extension community needs assessments are published and made available to other university faculty and the broader public via the UNCE website (www.unce.unr.edu/publications/assessments).

Frequently, faculty develop partnerships with a variety of stakeholder groups as part of program planning, development, and implementation. These community and organizational

partnerships provide an ongoing venue for receiving stakeholder input and feedback for the life of a program.

Additionally, a 12-member UNCE Advisory Committee meets biannually to provide broad guidance on programs and policies. Committee members represent a diverse cross-section of stakeholders from both rural and urban communities, including minorities. Two of the Advisory Committee members also serve as representatives on the Council of Agricultural Research, Extension, and Teaching (CARET) and regularly communicate with Nevada's Congressional delegation as well as USDA/NIFA administrators.

2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys

Brief explanation.

UNCE faculty use a variety of methods to identify individuals/groups of stakeholders and to collect their input, including collecting primary data through surveys and interviews and secondary data from sources such as the US Census and Bureau of Economic Analysis. UNCE also utilizes a diverse collection of community advisory and stakeholder groups as an additional means of identifying stakeholders and to collect program input. Such groups include, for example, American Indian tribal governments and leaders, 4-H Leader Councils, 4-H Teen Ambassadors, 4-H Teen Councils, Boys and Girls Club of America Advisory Boards, Nevada Public School Districts, National Association of Counties-Nevada, Northern Nevada Business Connections, Specialty Crop Institute, Small Business Development Centers, Healthy Community Coalitions, Farm Bureau, Resource Conservation Districts, Irrigation Districts, Nevada Specialty Crop Institute, FFA Advisors, County Offices of Juvenile Probation, and United Way. Input is also sought from federal and state agency personnel, such as USDA Rural Development, Farm Service Agency, Natural Resource Conservation Service, Bureau of Land Management, Nevada Department of Agriculture, and Governor's Office for Economic Development. As the outreach unit of Nevada's land-grant university (UNR), UNCE develops program partnerships with all Nevada System of Higher Education (NSHE) institutions and seeks programmatic input from NSHE faculty and students. Special-interest groups, such as Nevada Grown, Walker River Stewardship Council, and Great Basin Food Advisory Council, provide input as well.

2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting with the general public (open meeting advertised to all)

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

Brief explanation.

UNCE values the input of its past, current, and potential program stakeholders. Face-to-face meetings and surveys are effective methods for identifying program priorities and implementation strategies. For several years, Nevada's strategic plan has included listening sessions in each of its 17 counties, as well as needs-assessment meetings with various stakeholder groups, industries, businesses, and other organizations across the state. Meeting with both traditional and non-traditional stakeholders, in groups and individually, provides a vehicle for collecting input while also strengthening relationships and program partnerships.

3. A statement of how the input will be considered

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

Brief explanation.

UNCE uses stakeholder input to identify emerging issues, to direct and redirect Extension programs, and establish needs priorities in the hiring process. This includes strategic planning, development of Extension Specialist positions, hiring, and periodic redirection of Extension teaching/research programs. Since teaching and research occur in communities, community stakeholder input is essential to the UNCE mission and effective development, evaluation, and revision of action plans. Given that Nevada is a predominantly-urban population, broad stakeholder input is critical to satisfying the state's six legislatively mandated program areas, which redirects UNCE from a primarily rural focus on agriculture and home economics to a statewide focus on a broad spectrum of urban and rural issues (in 1999, Nevada Revised Statutes (NRS) 549.010 was amended "to provide for continued educational, research, outreach and service programs pertaining to agriculture, community development, health and nutrition, horticulture, personal and family development, and natural resources in the rural and urban communities"). This legislative change was instituted to expand UNCE's educational programming into Nevada's fast-growing, urban communities and has been the foundation of UNCE's expanded urban programming since 1999. As an independent unit, UNCE serves the needs of, and develops partnerships with, all of the NSHE campus units. UNCE faculty also collaborate on Nevada Agriculture Experiment Station research projects, as determined by identified programming needs and available funding.

Brief Explanation of what you learned from your Stakeholders

In order to effectively target limited budget resources and design programs that address stakeholder needs, UNCE faculty continually conduct assessments. These assessments include collection and analysis of both primary and secondary data. As Nevada struggles to recover from

the recession, much of the input from stakeholders is focused on increasing food security and conserving natural resources, particularly water. That is, the number of small-acreage agricultural producers has increased considerably since 2008, which has created a new demand for farm/ranch on-site food-safety programs. With the competing demands for scarce water resources in Nevada, traditional (large-scale) producers have developed an interest in producing low-water alternative crops, some of which may be used for the biofuel industry. Rural and urban populations alike in Nevada continue to struggle with: a) obesity accompanied by poor health and nutrition issues; b) successful youth-to-adult transition; and c) joblessness and underemployment. UNCE faculty are actively pursuing these larger issues while also addressing related issues, such as positive youth development/parenting skills and regional economic development strategies.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1039237	0	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	1039237	0	0	0
Actual Matching	1039237	0	0	0
Actual All Other	1230835	0	0	0
Total Actual Expended	3309309	0	0	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous				
Carryover	0	0	0	0

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Global Food Security and Hunger: Agriculture & Horticulture
2	Climate Change and Natural Resources
3	Sustainable Energy
4	Childhood Obesity, Health, and Nutrition
5	Food Safety
6	Human & Family Development
7	Community and Economic Development
8	Childhood Obesity
9	Natural Resources Sustainability

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Global Food Security and Hunger: Agriculture & Horticulture

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
111	Conservation and Efficient Use of Water	10%			
121	Management of Range Resources	15%			
205	Plant Management Systems	15%			
211	Insects, Mites, and Other Arthropods Affecting Plants	5%			
216	Integrated Pest Management Systems	15%			
307	Animal Management Systems	5%			
601	Economics of Agricultural Production and Farm Management	5%			
602	Business Management, Finance, and Taxation	10%			
604	Marketing and Distribution Practices	10%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	5%			
806	Youth Development	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	8.0	0.0	0.0	0.0
Actual Paid Professional	12.3	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
334975	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
334975	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
396731	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct applied research on Nevada rangelands involving range ecology concepts and livestock grazing systems.
- Publish studies, develop curricula, and teach workshops related to plant and livestock production.
- Educate local, state, and regional stakeholders concerning progress in producing livestock and plants that are economically viable and environmentally friendly.
- Establish herbicide demonstration/research plots to evaluate the efficacy of these products under local conditions.
- Expand use of Integrated Pest Management (IPM).
- Coordinate Nevada IPM efforts with other western states.
- Educate Nevada land managers, producers, and general public regarding invasive weed identification and control.
- Strengthen the skills small-acreage producers.
- Utilize multiple demonstrations/applied research plots to explore high-value specialty crops and manage weeds in agronomic crops, with results reported at field days, workshops, or professional annual meetings.
- Develop applications for the research on plant production to directly benefit producers.
- Provide risk management strategies to agricultural producers.
- Provide teaching and research outreach to agriculture businesses to provide in-depth information on small-business management, farm profitability, and market development.

2. Brief description of the target audience

The target audiences for these programs include beginning and existing large-scale crop and livestock (primarily beef/dairy/sheep) producers and small-acreage operators. USDA agencies and other government entities that conduct work in this area are an audience and frequently a program partner.

3. How was eXtension used?

UNCE faculty are on several eXtension CoPs and both use and contribute resources to eXtension; owever, we are debating the utility of this as a means of supporting and delivering programs.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	20793	0	1923	0

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

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	19	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of personal contacts through all means by Master Gardener volunteers with those requesting information or assistance.
Not reporting on this Output for this Annual Report

Output #2

Output Measure

- Number of green industry employees certified in proper horticulture techniques.
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of target audiences who learn best management or risk management/skills for alternative or sustainable agriculture.
2	Total acres planted or tested for potential alternative crops in Nevada.
3	Number of participants who apply or use best management or risk management knowledge/skills learned for alternative or sustainable agriculture.
4	Number of producers or individuals or learn or apply changes in operations to increase niche farming opportunities for Nevada Producers.
5	People learning how to produce more of their own food through "grow your own."
6	Number of individuals who gain knowledge about improved human, plant, and animal management systems for sustainable agriculture.
7	Number of individuals who implement improved human, plant, and animal management systems for sustainable agriculture.

Outcome #1

1. Outcome Measures

Number of target audiences who learn best management or risk management/skills for alternative or sustainable agriculture.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Total acres planted or tested for potential alternative crops in Nevada.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Number of participants who apply or use best management or risk management knowledge/skills learned for alternative or sustainable agriculture.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Number of producers or individuals or learn or apply changes in operations to increase niche farming opportunities for Nevada Producers.

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

People learning how to produce more of their own food through "grow your own."

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Number of individuals who gain knowledge about improved human, plant, and animal management systems for sustainable agriculture.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Number of individuals who implement improved human, plant, and animal management systems for sustainable agriculture.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	2000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Efficient production of field crops and forages is essential to maintaining the economic viability of Nevada's 3,131 agricultural operations. Each year, Nevada farmers and ranchers produce commodities that generate nearly \$513 million in income, with crop sales, which include nursery and greenhouse production, accounting for approximately 43% of this value (NASS, 2011). The livestock industry generates much of the remaining farm income and the majority of farmland in Nevada is devoted to supplying the forage and nutritional needs of cattle. A significant beef industry also requires effective stewardship of thousands of acres of public rangelands. Also, it is estimated that the number of small farms (less than 50 acres) in Nevada has increased steadily in recent years; but until the 2012 census figures are published the data are inconclusive. Exploring alternative crop production in Nevada is a high priority. UNCE has been working with producers on the production of 14 alternative crops that have the potential to be high value and low-water use, including teff.

What has been done

UNCE faculty combine applied research and teaching to educate agricultural producers on specific subjects designed to improve their skill set and, subsequently, their success. Teaching methods include field demonstrations featuring research plots to strengthen cultural management

practices while exploring water-conserving crops, managing rangelands, and identifying and controlling for weeds, pests, and disease. UNCE faculty also emphasize business and marketing planning to help producers increase profitability.

Results

As a direct result of the Grow Your Own, Nevada program that teaches how to grow and produce food for local consumption, at least two participants started their own businesses.

In Lincoln County, the three-year Community Value-Added Processing program was completed. During the project, nine new products were developed with 12 more in development. Eleven producers continue to implement their knowledge in 27 hoop houses. One participant farm built a small test kitchen for community use.

The People of the Land program continues to expand, with requests and projects extending to Montana, Washington, Arizona. A fourth printing of the original People of the Land curriculum is currently underway, as more than 4,000 copies have already been distributed across the United States.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
121	Management of Range Resources
205	Plant Management Systems
216	Integrated Pest Management Systems
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Nevada's slow economic recovery, in addition to the increasing demand for locally-produced foods, inspired a steady increase in small farm/ranch operations, CSAs, and

community and school gardens. Traditional large-scale producers were challenged by severe drought conditions, the spread of invasive weeds, and the potential for sage grouse to be listed as a threatened or endangered species.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

UNCE faculty evaluate the outcomes and impacts of programs largely through participant/stakeholder self-evaluations. Evaluations of selected Global Food Security and Hunger programs in 2013 include the Nevada Beginning Farmer and Rancher (Herds & Harvests; Risk Management Education; Grow Your Own, Nevada; Eagles and Agriculture; and IPM and related weed management programs. Evaluations comprise self-administered questionnaires involving pre-tests and post-tests administered immediately following the educational intervention. Six-month follow-up surveys and interviews are also used frequently.

Key Items of Evaluation

More than half (57%) of UNCE's beginning farmers and ranchers participants reported taking actions to make changes in some aspect of their agricultural business as a result of attending Herds & Harvest workshops.

As a result of participating in the Nevada Targeted States Risk Management program in 2013, approximately 46% producers reported they had made notable changes to their operation, which made them more economically viable.

As a result of IPM education, virtually every acre of teff grain planted in Nevada was treated with Latigo® to manage broadleaved weeds, ensuring that UNCE's educational programs will have a significant impact on the profitability of teff farmers.

Grow Your Own, Nevada participants reported an average of 29.4% to 80.6% knowledge gains in a variety of areas regarding growing and producing food for local consumption. Additionally, the program website was accessed nearly 18,000 times in 2013.

Eagles and Agriculture enhances participant knowledge in wildlife habitat and local agriculture. Approximately 400 people attended the 2013 event, and respondents (n=69) gained a better understanding of Carson Valley agriculture (4.14), have a greater appreciation for the role agriculture plays in providing wildlife habitat (4.00), and have greater understanding for the benefits agriculture provides our society (3.86) (5 point Likert-type scale, 1=strongly disagree and 5=strongly agree).

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Climate Change and Natural Resources

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	3%			
111	Conservation and Efficient Use of Water	15%			
112	Watershed Protection and Management	10%			
121	Management of Range Resources	10%			
122	Management and Control of Forest and Range Fires	15%			
123	Management and Sustainability of Forest Resources	1%			
131	Alternative Uses of Land	10%			
133	Pollution Prevention and Mitigation	10%			
205	Plant Management Systems	10%			
213	Weeds Affecting Plants	10%			
307	Animal Management Systems	5%			
605	Natural Resource and Environmental Economics	1%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	0.5	0.0	0.0	0.0
Actual Paid Professional	2.4	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
74395	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
74395	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
88112	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Educate and partner to enable the recovery of the sage grouse habitat to avoid its listing as a threatened or endangered species.
- Conduct applied research to determine management options that slow or stop the cycle of cheatgrass and fire on previously burned areas through range rehabilitation, seeding programs, and nontraditional approaches to grazing management.
- Educate property owners about managing wildfire risk through fuels reduction strategies.
- Educate producers and agency personnel on the need for continued range evaluation, monitoring, and management improvements and the role of grazing management in sustainable resource management.
- Educate the public on responsible use and the value of multiple uses on rangelands.
- Illustrate the need for management and control of pinion-juniper forests to restore watershed, wildlife habitat, and forage values on rangelands.
- Partner with and educate the general public, livestock producers, and agency personnel on the identification and methods of control of the specific noxious and invasive species.
- Provide educational training and collaborative problem solving to facilitate rehabilitation of degraded watersheds, protect and manage watersheds, and conserve, manage, and enhance efficient water use.

2. Brief description of the target audience

The target audience includes agricultural producers, mining industry representatives, environmentalists, green-industry professionals, small-acreage owners, general public, federal and state natural-resource management agencies, and other resource managers.

3. How was eXtension used?

eXtension was not used in this program. We are not convinced that eXtension is a useful expenditure of our resources.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	2394	0	100	0

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

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	7	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of individuals who gain knowledge about improved human, plant, and animal management systems that relate to climate change and/or natural resource use.
2	Number of individuals applying or using new knowledge to improve human, plant, and animal management systems as related to climate change and/or natural resource use.

Outcome #1

1. Outcome Measures

Number of individuals who gain knowledge about improved human, plant, and animal management systems that relate to climate change and/or natural resource use.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	2000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

In 2013, Nevada experienced its second consecutive year of state-wide severe drought, significant wildfire damage to agricultural and range lands during the wildfire season, and damage from wildfires at the urban-rural interface outside of the typical wildfire season. These natural disasters occurred during a time of sluggish economic growth, further slowing the Nevada's recovery from the recession.

What has been done

The Great Basin Fire Science Delivery Program (GBFSDP), in existence for about three years, is one of 14 consortia across the country designed to increase the dissemination and application of wildfire science information on the ground. Project information delivered by the GBFSDP is distributed via multiple media, including a list-serve (newsletter), website, webinars, and synthetic publications.

UNCE's Living with Fire (LWF) program continued to expand its target audience through increased distribution of educational materials and teaching activities. This nationally-acclaimed program is designed to help land owners/managers take steps to avoid and prevent catastrophic wildfire at the urban-rural interface.

Results

In 2013, the GBFSDP team hosted five webinars. All webinars (current and previous years) were accessed by 1,919 unique viewers for a total of 3,401 visits. On average, there were 154 new visitors and 184 returning visitors each month. The high return rate strongly indicates the project is meeting the research-based knowledge needs of many resource specialists who work with fire, fuels, and vegetation management issues.

In 2013, LWF involved all 17 Nevada counties and distributed 12,329 copies of 17 different LWF publications. Approximately 21,000 online visitors viewed 41 different LWF publications and educational tools (including nine Spanish language publications), four states requested program

material parent files in order to customize materials, and permission to use LWF content was granted to 12 out-of-state entities. In 2013, the International Association of Fire Chiefs, the world's largest professional organization of fire service administrators, chose to endorse and promote LWF materials as part of their national Ready, Set, Go! Campaign.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
122	Management and Control of Forest and Range Fires
123	Management and Sustainability of Forest Resources
205	Plant Management Systems

Outcome #2

1. Outcome Measures

Number of individuals applying or using new knowledge to improve human, plant, and animal management systems as related to climate change and/or natural resource use.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Climate change research predicts a decrease in reliable precipitation patterns for much of the US. These predictions will require a proactive natural resource management approach in a state that receives less than nine inches of precipitation annually. Diverse, competing demands for scarce water resources are likely to increase. Efficient water use and the protection of water quality are essential to the sustainability of Nevada's rangeland health, wildlife habitat, agricultural industry, and continued economic growth. Diverse and competing interests for Nevada's water resources will exacerbate climate change issues.

What has been done

UNCE faculty developed the Desert Bioscape program to teach the conservation of natural resources in an urban setting. For several years, UNCE faculty have led an interdisciplinary and interagency effort to teach Range Management School (RMS) curriculum, the content of which emphasizes sustainability and cooperation between conservationists and ranchers. The RMS

courses ensure better forage for livestock and healthy, productive rangelands for wildlife and recreational use.

Results

The Desert Bioscape program taught 308 participants how to conserve water and energy use, reduce pesticide and chemical fertilizer use, and promote wildlife habitat in a sustainable manner, all on both a homeowner and commercial basis. UNCE faculty presented six sessions on the components of grazing management in northern and central Nevada counties, attended by 332 participants. Additionally, faculty presented another symposium in Elko, with 85 attendees from Nevada and three neighboring states, and another 30 participants connected via video conference at three locations in Nevada and Oregon. A summary of retrospective surveys administered after each session showed substantial knowledge gains in grazing management by all attendees.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
121	Management of Range Resources
123	Management and Sustainability of Forest Resources
605	Natural Resource and Environmental Economics

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (grant funding availability)

Brief Explanation

The listing or potential listing of the greater sage-grouse as threatened or endangered indicates shifting public policies and competing public priorities. Compliance with the Clean Water Act requires the education of property owners, land managers, and landscape industry professionals.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

UNCE faculty evaluate the outcomes and impacts of programs largely through participant/stakeholder self-evaluations. Evaluations of selected Climate Change and

Natural Resources programs in 2013 include Agricultural Innovation Forum Series (AIFS) and BMP Retrofit/ Environmental Improvement program. Evaluations comprise self-administered questionnaires involving pre-tests and post-tests administered immediately following the educational intervention. Six-month follow-up surveys and interviews are also used frequently.

Key Items of Evaluation

AIFS provides practical information for agricultural producers and small acreage owners to optimize their land-use potential and maintain agricultural open space in Carson Valley. A total of four two-hour programs were conducted over six months. Forum attendance averaged 15 per session in the four forums offered. Evaluation respondents (n=19) indicated they found the forums extremely informative (90%). The majority of respondents (58%) claimed that what they learned in the series had absolutely changed what they will do in the future. Information gleaned from the forum was shared with others by 95% of the respondents. Eighty-nine percent of respondents strongly or somewhat agreed that they have gained the knowledge of how to optimize their land-use potential. As a result of the BMP Retrofit/ Environmental Improvement program and efforts of BMP Retrofit partners in 2013, 389 BMP Site Evaluations were performed on private properties, and 516 Certificates of BMP Completion were awarded by Tahoe Regional Planning Authority (TRPA). Since UNCE formed the BMP Retrofit partnership in 2000, TRPA has issued 16,424 Certificates of BMP Completion. This is a desired mid-term outcome, showing behavioral change, because every property that earns a Certificate of Completion must have BMPs implemented correctly.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Sustainable Energy

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
131	Alternative Uses of Land	15%			
133	Pollution Prevention and Mitigation	10%			
205	Plant Management Systems	45%			
605	Natural Resource and Environmental Economics	15%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	10%			
903	Communication, Education, and Information Delivery	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	0.0
Actual Paid Professional	0.5	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
13611	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
13611	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
16120	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct applied research into alternative crops as potential biofuels and methods of production that are well-suited for Nevada.
- Report on and adapt research to educate producers outlining benefits and costs.
- Educate the public about sustainable practices, renewable energy use, and environmentally responsible lifestyles.

2. Brief description of the target audience

Target audiences include agricultural producers, general public, citizen and special interest groups, related industries, and federal, state, and local government agencies.

3. How was eXtension used?

eXtension was not used in this program; it is not useful for program delivery and support.

V(E). Planned Program (Outputs)

1. Standard output measures

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

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of individuals who gain knowledge about sustainable energy and environmentally responsible lifestyles.
2	Number of individuals who implement practices related to or in support of sustainable energy and environmentally-responsible lifestyles and practices.

Outcome #1

1. Outcome Measures

Number of individuals who gain knowledge about sustainable energy and environmentally responsible lifestyles.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Applied research and educational programs are needed to educate the public about sources of sustainable energy. This includes discovery of a portfolio of programs to develop biomass used for biofuels, design optimum crops for bioenergy production, and produce value-added, bio-based industrial products. It also includes enhancing public awareness of alternative land uses as natural resources for environmentally-responsible lifestyles.

What has been done

UNCE faculty completed a series of cellulosic biofuel field experiments in 2013, providing the only source of replicated data in Nevada regarding production of cellulosic biofuels. UNCE faculty collaborated with Nevada producers in identifying high value, lower water use crops that can be produced as alternatives to hay production. These crops include food crops, forage crops, and industrial crops with the potential of biofuels. A second priority is developing re-vegetation techniques and identifying adapted perennial plant species that can be used to reclaim abandoned farmlands in Nevada.

Results

The results of these cellulosic biofuel field experiments demonstrated conclusively that, while yields obtained from both cool and warm season grasses were relatively high, this production came only with maximum applications of water and regular fertilizer applications. Canola trials results have been statistically analyzed and a preliminary report and fact sheet are in preparation. Public demand has increased seven-fold for information on canola production techniques.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land

133	Pollution Prevention and Mitigation
205	Plant Management Systems
605	Natural Resource and Environmental Economics
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
903	Communication, Education, and Information Delivery

Outcome #2

1. Outcome Measures

Number of individuals who implement practices related to or in support of sustainable energy and environmentally-responsible lifestyles and practices.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (grant funding availability)

Brief Explanation

Each of these factors challenges advancement in the program area.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Although few in number, the programs UNCE faculty offer to date in this NIFA priority area include quantified evaluative data for crop field trials where results are used to educate producers and document impacts. Evaluations in 2013 of these three programs include results of cellulosic biofuel research and trials.

Key Items of Evaluation

Evaluation studies of cellulosic biofuel production in Nevada indicate prohibitive high input costs and unacceptable low product values. Evaluation of this project provides solid evidence precluding economically viable production of cellulosic biofuel products in northern and western Nevada. This information is extremely valuable for anyone contemplating an investment in commercial production cellulosic biofuels in Nevada. Formal evaluations of pre-test and post-test scores measuring knowledge increases in response to the question "How to decide if cellulosic biomass is a potential alternative crop" revealed a statistically significant increase on a 1-5 scale following

educational workshops in Pershing County (pre= 1.43, post= 3.43) and in Churchill County (pre = 1.75, post =4.00). UNCE faculty presented results at the 2013 American Society of Agronomy, Crop Science Society, Soil Science Society annual meeting.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Childhood Obesity, Health, and Nutrition

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
610	Domestic Policy Analysis	5%			
702	Requirements and Function of Nutrients and Other Food Components	25%			
703	Nutrition Education and Behavior	25%			
704	Nutrition and Hunger in the Population	5%			
723	Hazards to Human Health and Safety	5%			
724	Healthy Lifestyle	25%			
802	Human Development and Family Well-Being	5%			
806	Youth Development	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	0.0	0.0
Actual Paid Professional	8.8	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
218065	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
218065	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
258270	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct research with respect to obesegenics, health, and nutrition.
- Develop, teach and evaluate research-based programs focused on health and nutrition.
- Develop and contribute materials to eXtension COP and other national efforts in obesity, health, and nutrition.
- Partner with professional educators to educate youth and families to improve health and nutrition.
- Publish curricula, journal articles, and fact sheets pertaining to health and nutrition.

2. Brief description of the target audience

The primary target audience is pre-school and grade-school children and their families. A secondary audience is professional educators and childcare providers.

3. How was eXtension used?

Faculty involved in childhood obesity, health, and nutrition related programming are actively involved in eXtension COP and other national efforts in this area; however, it is unclear that eXtension is useful for program support and delivery.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	32808	0	100611	0

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

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	5	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of health professional and others trained/educated about breastfeeding.
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of individuals (adults & youth) who will learn knowledge or skills necessary to make healthy lifestyle and food choices for themselves or those they care for (knowledge learned).
2	Number of individuals (adults & youth) who adopt one or more healthy lifestyle practices or food choices (behavior).
3	Number of youth increasing awareness, knowledge and/or skills related to increasing the consumption of calcium rich foods.
4	Number of radon test kits distributed and used in Nevada.
5	Number of homes with high radon levels mitigated to lower radon risks.
6	Seniors improving nutrition and/or healthy living knowledge or skills.

Outcome #1

1. Outcome Measures

Number of individuals (adults & youth) who will learn knowledge or skills necessary to make healthy lifestyle and food choices for themselves or those they care for (knowledge learned).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	653

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Onset of obesity in childhood accounts for 25% of adult obesity; but obesity that begins before age 8 and persists throughout childhood is associated with an even greater degree of adult obesity. According to the 2007 Nevada Youth Risk Behavior Survey (YRBS), 81% of students ate fruits and vegetables fewer than five servings a day (78.6 % of U.S. students). Picky-eating behaviors are prevalent during childhood and are often linked to nutritional problems (dietary adequacy and body weight). Increasing evidence has also demonstrated parent feeding practices and style influence the development of young children's eating behaviors, food preferences, and dietary patterns.

What has been done

UNCE faculty developed Little Books and Little Cooks, a 7-week parenting education program for preschool-age children (3-5 years old) and their parents designed to promote healthy eating, family literacy, parent-child interaction, and child's school-readiness skills. This program features a 182-page formal program curriculum (7 lesson plans) for use in program delivery. During the program, children and parents learn together about healthy eating and nutrition, gain positive parent-child interaction skills, and practice school-readiness skills (cooking and preparation skills) by reading children's books about healthy eating/nutrition and cooking/eating. Each weekly session features a new book about healthy eating and a new recipe

Results

In 2013, the Little Books and Little Cooks program (seven weekly sessions/ two-hour sessions) was provided at 18 community sites and reached 282 families. At the end of the program, parents showed significant improvement in parent-child interactions during cooking and eating, children were more likely to consume fruits and vegetables when served, and children were less picky eaters than prior to the program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

Outcome #2

1. Outcome Measures

Number of individuals (adults & youth) who adopt one or more healthy lifestyle practices or food choices (behavior).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	30000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Almost one-third of children in America are overweight or at risk for overweight, increasing their probability of developing chronic illnesses such as high blood pressure, high cholesterol, and Type 2 diabetes. Nevada estimates the costs associated with treating conditions related to overweight and obesity is \$337 million. A recent report released by the Nevada Institute for Children's Research and Policy on the health status of children entering kindergarten in the Nevada school system (n=3,597) stated 21% of the children in the study were obese and an additional 13% were overweight.

What has been done

UNCE's All 4 Kids program utilized an interdisciplinary approach to address child obesity. All 4 Kids staff teach 24, 30-minute lessons plans three times a week for eight weeks to preschoolers. Teachers participate in the lessons and parents are engaged in family activity nights. In 2013, 790 preschool children and 353 parents participated in All 4 Kids. The program (1,053 lessons and 35 family events) was taught at six different childcare sites.

Results

After participating in the All 4 Kids sessions, pre-post measures and assessments indicate that

preschool children significantly improved in all four major physical skill tests and preferred healthy snacks when given a choice. The All 4 Kids program team developed a service agreement with Acelero Learning Head Start. This required Acelero teachers to co-teach with the All 4 Kids team, thereby increasing numbers of children/families reached. UNCE faculty also conducted teacher training to Head Start and Clark County School District teachers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

Outcome #3

1. Outcome Measures

Number of youth increasing awareness, knowledge and/or skills related to increasing the consumption of calcium rich foods.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Number of radon test kits distributed and used in Nevada.

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Number of homes with high radon levels mitigated to lower radon risks.

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Seniors improving nutrition and/or healthy living knowledge or skills.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (grant funding availability)

Brief Explanation

Each of these factors influenced programs in 2013.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Evaluations in 2013 of numerous UNCE programs that address this NIFA priority area include results of EFNEP, Chefs for Kids Intensive, and All 4 Kids. Evaluations are largely based on pre- and post-intervention observation of targeted participant behaviors. In some cases, where appropriate, parent and teacher self-evaluations were used to document perceived knowledge gains and behavioral changes.

Key Items of Evaluation

Evaluation studies indicate that, of the 791 participants in the EFNEP programming, 99.4% of assessed participants improved their diets in at least one healthy area (fruits, vegetables, whole grains, etc.), 92% showed improvement in one or more nutrition practices (plans meals, prepares food without salt, reads nutrition labels, etc.), 86% stretched their food dollars further, and 73% handled food more safely (thawing and storing foods properly).

Chefs for Kids Intensive (Food for Health) assessed a total of 1,061 second-grade students for their snack behavior. Results showed that, before the program, 318 students (30%) chose three snacks rated as less healthful; following the intervention, only 75 students (7%) chose three snacks rated as less healthful. Second-grade students improved their average score from 21.3 on the pre-test to 26.8 on the post-test, indicating that snack choices improved significantly by one healthy snack ($p < .0001$).

All 4 Kids pre-post evaluative measures indicate that preschool children ($n=189$) significantly improved all four major physical skill tests. Preschoolers also demonstrated increased preference for healthy snacks. Children's ability to distinguish between healthy and unhealthy snacks improved by 60%. These and additional study results indicate that All 4 Kids was an effective intervention program to change pre-school aged youth nutrition and health behaviors.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Food Safety

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
308	Improved Animal Products (Before Harvest)	15%			
315	Animal Welfare/Well-Being and Protection	15%			
501	New and Improved Food Processing Technologies	10%			
504	Home and Commercial Food Service	10%			
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	25%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	25%			
Total		100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	0.0
Actual Paid Professional	0.6	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
13713	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
13713	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
16240	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct workshops and meetings, deliver activities, develop new curricula, write newsletters and news releases, and post Internet fact sheets focused on food safety, Good Agricultural Practices (GAPs), and Good Handling Practices (GHPs).
- Continue to build partnership with Nevada Department of Agriculture to develop a voluntary Food Safety Certification program for producers.
- Educate and support producers to develop farm/ranch food safety plans to voluntarily meet the requirements of the Food Safety and Modernization Act.
- Educate the managers and operators of community and school gardens about food safety planning, GAPs, and GHPs.
- Educate professionals in the cottage food industry, food processors, and custodial food providers about food safety.
- Educate 4-H and FFA youth on "quality assurance" to comply with state requirement for market livestock projects.
- Educate youth and professional educators about basic food safety practices to follow in school and community garden environments.

2. Brief description of the target audience

This program targets agricultural producers, small acreage operators, and managers/operators of school/community gardens. Target audiences also include livestock producers who participate in Quality Assurance and 4-H/FFA youth participating in statewide and local competitive events with market projects. Food-safety programs also target professionals in the retail food industry and custodial food providers in child and senior care facilities.

3. How was eXtension used?

eXtension was not used in this program. eXtension is not useful for program delivery and support.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	307	0	0	0

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

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of individuals who gain knowledge about foodborne illness, farm/ranch food safety, and quality assurance.
2	Number of individuals who implement practices to prevent foodborne illness, which include farm/ranch food safety plans and quality assurance practices.

Outcome #1

1. Outcome Measures

Number of individuals who gain knowledge about foodborne illness, farm/ranch food safety, and quality assurance.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	307

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Nevada is one of the few states in the nation lacking a comprehensive Extension program dedicated to on-site food-safety issues involving production, harvesting, and post-harvesting levels. Agricultural producers and food consumers in Nevada require education about the importance of safe food production, handling, and processing to help reduce the risk associated with foodborne illness. UNCE seeks to build food-safety programs on a par with other land-grant universities in the US. This means strengthening the capacity of producers, regardless of operation size, to control and prevent accidental biological, chemical, or physical hazards that could contaminate food products during production, storage, and transportation.

What has been done

UNCE faculty partnered with Nevada Department of Agriculture and USDA inspectors to collaboratively develop a program to improve small farmers' Good Agricultural Practices (GAPs), Good Handling Practices (GHPs), and Hazard Analysis and Critical Control Points (HACCP) through education, planning, and voluntary on-site audits. Ongoing quality assurance trainings for adult and youth (4-H/FFA) livestock producers are designed to increase knowledge pertaining to quality market meat products and ethical animal treatment.

Results

UNCE faculty successfully forged new partnerships with the Nevada Department of Agriculture, to begin building a statewide educational program to help Nevada producers achieve farm/ranch site food-safety planning and practices.

Fewer quality-assurance training sessions were provided to livestock producers in 2013 due to a lack of faculty resources as a result of statewide budget cuts; nevertheless, UNCE faculty and staff were able to provide training to more than 100 producers on Good Agricultural Practices (GAPs) to improve food safety in Nevada.

4. Associated Knowledge Areas

KA Code	Knowledge Area
308	Improved Animal Products (Before Harvest)
315	Animal Welfare/Well-Being and Protection
501	New and Improved Food Processing Technologies
504	Home and Commercial Food Service
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #2

1. Outcome Measures

Number of individuals who implement practices to prevent foodborne illness, which include farm/ranch food safety plans and quality assurance practices.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Competing Public priorities
- Competing Programmatic Challenges
- Other (grant funding availability)

Brief Explanation

Each of these factors stifled progress in this program area, especially in consideration of the impact of appropriations changes on the budget.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Public demand is great for UNCE programs that emphasize farm/ranch food-safety planning and implementation. In response, UNCE faculty are developing programs to address this NIFA priority area. Evaluation will likely include formative and summative approaches, participant self-evaluation, and direct observation.

Key Items of Evaluation

UNCE faculty worked with USDA inspectors and Nevada Department of Agriculture staff, to begin building a statewide educational program to help Nevada producers achieve farm/ranch site food-safety planning and practices. This program is in the developmental stages and so evaluation data have not been collected to date.

Fewer quality-assurance training sessions were provided to livestock producers in 2013 due to lack of faculty resources as a result of statewide budget cuts; nevertheless, UNCE faculty and staff were able to provide training to 167 direct contacts on Good Agricultural Practices (GAPs) to improve food safety in Nevada.

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Human & Family Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	65%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	15%			
806	Youth Development	20%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	0.0	0.0
Actual Paid Professional	7.8	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
247372	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
247372	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
292978	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct research with respect to human and family development.
- Develop and publish research-based peer-reviewed curricula and journal articles in support of programs.
 - Expand eXtension Alliance for Better Child Care Community of Practice.
 - Support the positive development of at risk youth and young adults through the use of Nevada's Nationally Recognized Evidence-Based Programs, Bootstraps and Project Magic.
 - Develop and incorporate STEM components into human development programs to help prepare Nevada youth for success in secondary and post-secondary education and STEM careers.

2. Brief description of the target audience

Target audiences include youth, young adults, parents/families, childcare providers, and other youth/family professionals. Target audiences also include at-risk families, including military families and seniors.

3. How was eXtension used?

UNCE faculty served on the 3-member national leadership committee for the eXtension Alliance for Better Child Care Community of Practice, gathering Extension classroom teaching materials from across the country and posting them to the web site to provide classroom activities database (<http://www.extension.org/child%20care>). UNCE faculty also co-lead the Just in Time Parenting Community of Practice (<http://www.extension.org/parenting>).

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	15414	0	44477	0

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

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
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Actual	11	0	0
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V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of adults and youth reached in the Family Storyteller literacy program.
Not reporting on this Output for this Annual Report

Output #2

Output Measure

- Number of youth reached through the traditional 4-H Club program (ES-237).
Not reporting on this Output for this Annual Report

Output #3

Output Measure

- Number of youth reached through 4-H youth development programs through non-4-H Club membership (ES 237).
Not reporting on this Output for this Annual Report

Output #4

Output Measure

- Child care providers receiving training to improve their child care skills.
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Child care providers and family/youth professionals learning new knowledge or skills.
2	Number of at risk youth and/or their parents learning or developing the positive skills and attitudes necessary to be productive members of society.
3	Parents reached learning new knowledge and skills about children and parenting.
4	Youth and young adults learning or improving workforce development related skills.
5	Number of youth, families, and professionals who gain knowledge about positive human and family development.
6	Number of youth, families, and professionals who implement positive human and family development behaviors.

Outcome #1

1. Outcome Measures

Child care providers and family/youth professionals learning new knowledge or skills.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Number of at risk youth and/or their parents learning or developing the positive skills and attitudes necessary to be productive members of society.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Parents reached learning new knowledge and skills about children and parenting.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Youth and young adults learning or improving workforce development related skills.

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Number of youth, families, and professionals who gain knowledge about positive human and family development.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	5000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The training and education of the childcare provider is a key factor associated with the quality of care they provide. Ongoing professional development of childcare providers is an important part of ensuring that young children in Nevada receive quality care.

What has been done

Approximately 1,100 childcare providers participated in a series of UNCE faculty developed programs designed to increase the knowledge of childcare providers regarding early childhood development, abuse and neglect recognition, infant health and safety, Sudden Infant Death Syndrome, promoting appropriate behavior, and responding to temper tantrums in early childhood.

Results

Evaluations (primarily pre-post tests) were conducted for a number of components used in various child care provider training series. In each of the trainings, childcare providers achieved knowledge gains in: preparing for emergencies; providing a safe and healthy environment for young children; implementing appropriate transitions for preschoolers and promoting positive behavior, temperament, and how to respond to challenging behaviors; developmentally appropriate interactions, environments, and activities for young children; and how to care for infants and toddlers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #6

1. Outcome Measures

Number of youth, families, and professionals who implement positive human and family development behaviors.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	72

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Census data indicate that Nevada's rural communities have some of the highest rates in the nation regarding issues related to youth having difficulty transitioning to the workplace or adulthood. Additionally, the most vulnerable families, those headed by single females, are targeted for this program. Research supports the need for targeting families with the least financial resources and family support in order to improve the transition from youth to adulthood.

What has been done

In each of the locations where Bootstraps was conducted, a job coach was hired and trained in positive youth development methods, how to work with agency partners, effective communication, and conflict resolution. Participants received 80-hour trainings in job-site safety and weed control, with topics such as pesticide applicator safety, UNR policies, emergency communication, vehicle maintenance and safety, off-road and defensive driving, and first aid. Participants were also taught a 40-hour life skills curriculum throughout the six-month program. Participants spend 36 hours per week in natural resource management related fieldwork. Their work included surveying land for invasive weeds, applying herbicides, weed removal, and wildlife habitat restoration.

Results

As a result of Bootstraps, participants were significantly more likely to report having greater efficacy in completing tasks related to job safety; significant improvement in life-skill scores; significant improvement in knowing at least two ways to save money; positive trends in interpersonal skills such as being friendly, being respectful to others, working well in a team, and having a positive attitude from pretest to post test. Participants showed a statistically significant increase in understanding how to get the job they want. Although not statistically significant, participants showed a positive increase in knowing where to find information about jobs, confidence in finding jobs, and confidence about living on their own. Participants were significantly more likely to prepare for work properly, complete their jobs properly, have a positive attitude and clean appearance, and demonstrate better team work skills as rated by their job coaches.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Grant funding availability)

Brief Explanation

Each of these factors influenced program activity, as continued budget reductions maintain a negative effect on programming.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The majority of UNCE human and family development programs utilize a cluster evaluation approach to measure and document program outcomes and impacts. This approach features a suite of evaluative instruments that includes participants' self-evaluation pre-post surveys, risk-protective factor pre-post survey, field work pre-post survey completed by program instructors, portfolios completed by program participants, and long-term follow-up interviews with program participants conducted at the beginning and end of longer (3 to 6 month) programs and annually for a period of 5 years.

Key Items of Evaluation

Using a cluster evaluative approach, the cumulative 5-year evidence of the 72 Bootstraps participants' impacts includes statistically significant improvements in knowledge gain and behavioral change on short, intermediate, and long-term measures. Since the intent of the program is to create change among young adults neither in school nor working, the program dictates a small participation rate to provide the intensity of programming needed to create change. Increases were documented in every category of the participant portfolio rubric. Tasks that were measured included identifying personal strengths and weaknesses, problem solving, communication, leadership, responsibility, setting goals, and reaching goals. Pre-test and post-test mean scores increased a total of 112%. As for long-term program outcomes, interview data revealed participants expressed changes in acceptance of responsibility for their current situation and future direction, a recognition and willingness to use community resources for help, and ability to take pride in their work. Follow-up interviews with past program participants were completed to track their progress in their school and work pursuits after Bootstraps. UNCE faculty interviewed 90% of the 72 program graduates. With few exceptions, program graduates are in school or working. These graduates continue to use their local UNCE office faculty and staff as job references and to discuss issues in their lives.

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Community and Economic Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
605	Natural Resource and Environmental Economics	15%			
608	Community Resource Planning and Development	35%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	35%			
805	Community Institutions, Health, and Social Services	15%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual Paid Professional	5.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
137106	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
137106	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
162384	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Strengthen capacity among community stakeholders to participate in community development planning, including asset mapping, secondary data analysis, and social network analysis.
- Conduct applied research to assess regional economic development strategies for Nevada.
- Develop educational resources to build the capacity of elected and appointed officials to support sustainable economic development and viability at the community, county, regional, and state levels.
- Conduct workshops for elected and appointed officials focused on leadership ethics, Nevada's fiscal system, land-use planning, natural resource management, and economic growth.
- Develop service learning for university students to learn and practice civic engagement via Extension.

2. Brief description of the target audience

Target audiences include elected and appointed leaders and officials, business owners, general public, youth leaders, service learning students, land-use planners, and economic development professionals.

3. How was eXtension used?

eXtension was not used in this program, nor was it considered to be a useful way of supporting and delivering the program.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	5708	0	153	0

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

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	13	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of individuals learning new leadership or economic development skills/knowledge.
2	Number of individuals applying or using new leadership or economic development skills/knowledge in their organizations or communities.

Outcome #1

1. Outcome Measures

Number of individuals learning new leadership or economic development skills/knowledge.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	319

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The economic situation in Nevada remains grim; no state has been hit harder by the housing downturn than Nevada, where home values have fallen nearly 70% since 2006. Although 2013 showed a nearly 20% turnaround in home values nationally, Nevada's largest city, Las Vegas, reported 50% of mortgages were underwater, the largest percentage nationally. While unemployment declined from 8.1% in 2012 to 7.4% in 2013, Nevada again reported the second-highest unemployment rate (9.4%) in the US after Puerto Rico (13.9%). While the state works to diversify its tourism- and mining-dependent economy, economists estimate that Nevada's housing sector may require more than a decade to recover.

What has been done

Stronger Economies Together (SET) teaches rural communities to work as a regional team to develop and implement an economic development plan that builds on the current and emerging economic strengths of the region. In 2013, the SET team developed a blueprint that will eventually evolve into a comprehensive economic development strategy. The SET program provided three one-day workshops to a total of 319 participants.

Results

The SET regional program team participated in the 2013 Governor's Rural Summit. During the Summit, the SET team reported on the following working plans: 1) the new dry milk processing plant under construction in Churchill County is expected to create 40-50 full-time jobs and have a \$100 million impact on Nevada's northern counties; 2) the city of Hawthorne is working with the Department of Defense to use existing military structures for agribusiness operations; 3) tourism opportunities to supplement the Burning Man event; 4) SET received a \$5,000 grant to develop a regulatory food map for small agricultural producers; and 5) SET is applying for a Department of Energy grant to conduct an alternative energy assessment. All of these projects represent expansion of economic possibilities across all sectors within Nevada.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #2

1. Outcome Measures

Number of individuals applying or using new leadership or economic development skills/knowledge in their organizations or communities.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	2474

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Ninety-five percent of Nevada businesses are considered small by having fewer than 20 employees; under this definition, approximately 45% of Clark County's workforce is employed by a small business. The importance of small businesses to Nevada's economy is why, in partnership with Clark County and Economic Development Administration (EDA), the Business Opportunity and Workforce Development (BOWD) program was implemented under the Strategic alliance for emerging Small businesses (SafeSB) that includes a working partnership among public, private, and nonprofit entities.

What has been done

This program trained small businesses on how to access and compete for local, state, and federal procurement contacts; however, the basic business principles learned during the training classes also provide tools and skills that are targeted to grow individual business and expand and/or sustain employment opportunities in Nevada. The BOWD program is designed to address the identified need for small business best practices training, technical assistance, and improved connectivity with business resources, especially when doing business with governments and agencies.

Results

In 2013, 132 small businesses enrolled in the program and 115 graduated resulting in an 87% graduation rate. All of the 115 businesses directly contacted Clark County departments that may require their products or services. All 115 businesses (100%) that completed the BOWD program prepared and distributed to Clark County departments a one-page statement of qualifications, and 38 businesses (33%) submitted a bid for services or supplies. Approximately 47% (18) of businesses that submitted a bid to Clark County received a contract.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (grant funding availability)

Brief Explanation

These primary factors significantly affect activities in this program area.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

For the SET program, initial evaluation instruments include pre-post tests administered at each of the nine sessions. Results from the planning efforts of these groups will be further measured in 2014, when projects are implemented. Evaluation studies of the BOWD program include participant self-evaluations. Additionally, related economic data include business grant awards from Clark County and calculated multiplier effects. Additional impacts are being collected to include all changes in program participant business habits and activity.

Key Items of Evaluation

Preliminary evaluation studies indicate that SET was successful in creating a regional vision for economic development along with five economic sector and four capacity building goals. A regional economic development blueprint was developed. This blueprint will eventually evolve into a comprehensive economic development strategy for the region. Other significant outcomes included the networks and relationships built within the region, as well as the origin for an appreciation for a regional approach to economic

development. For the five targeted industries and four capacity building platforms, strategy and action workgroups have been assembled that continue to meet monthly.

Evaluation studies of the BOWD program for 2013 indicates that Clark County awarded more than \$1.5 million to recent graduates of the BOWD program; this is an average of \$83,333 per awarded contract (18). These contracts have also created 50 new jobs because of business expansion to meet newly created demand. Using a multiplier of 1.8, it is estimated that this program, during 2013, had a total economic impact (direct + indirect + induced) on Clark County of over \$2.7 million and supported 90 total jobs.

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Childhood Obesity

Reporting on this Program

Reason for not reporting

Combined with Health and Nutrition. See Childhood Obesity, Health, and Nutrition.

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	0.0	0.0
Actual Paid Professional	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual Volunteer	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	1890 Matching	1862 Matching	1890 Matching
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	1890 All Other	1862 All Other	1890 All Other
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

"All for Kids" is an interdisciplinary approach addressing child obesity. Utilizing strategies from maternal/child health and nutrition, exercise physiology and child development, this program encourages preschool children and their families to engender healthy eating habits and being active every day. Cooperative Extension staff provide 24, 30-minute lessons three times a week for eight weeks to

preschoolers. Families are engaged in weekly nutrition activities and monthly events to extend the education to the home.

This program has been extensively piloted and a variety of curriculum materials and educational tools form videos, to music, etc. have been developed.

"Chefs for Kids" is aimed at 1st and 2nd graders during school. It focuses on food and nutrition, making healthy choices as well as physical activity.

2. Brief description of the target audience

The primary target audience is per-school youth and youth in elementary school along with their families. A secondary audience is those who teach youth health, nutrition and physical activity or care for youth - parents, teachers, child care providers, health educators, etc.

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2013

Actual: {No Data Entered}

Patents listed

{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	3	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Preschoolers improving physical skills for improved health and weight control (All 4 Kids).
2	Preschoolers who would choose a health snack over an unhealthy snack when presented a choice (All 4 Kids).
3	First and second grade students learning healthy food choices and good physical activity choices (Chefs For Kids).
4	Youth learning to make healthy food choices and gaining physical activity through "hands on" school garden based educational programs.
5	American Indian youth increase awareness of and exposure to a variety of vegetables and fruits, including traditional American Indian varieties ("Veggies For Kids").

Outcome #1

1. Outcome Measures

Preschoolers improving physical skills for improved health and weight control (All 4 Kids).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #2

1. Outcome Measures

Preschoolers who would choose a health snack over an unhealthy snack when presented a choice (All 4 Kids).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #3

1. Outcome Measures

First and second grade students learning healthy food choices and good physical activity choices (Chefs For Kids).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
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2013 0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #4

1. Outcome Measures

Youth learning to make healthy food choices and gaining physical activity through "hands on" school garden based educational programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
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{No Data}	null
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Outcome #5

1. Outcome Measures

American Indian youth increase awareness of and exposure to a variety of vegetables and fruits, including traditional American Indian varieties ("Veggies For Kids").

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
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{No Data}	null
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V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Other (Grant availability)

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Natural Resources Sustainability

Reporting on this Program

Reason for not reporting

Program is not reported separately; it is combined with climate change. See Climate Change and Natural Resources.

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	0.0	0.0
Actual Paid Professional	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual Volunteer	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	1890 Matching	1862 Matching	1890 Matching
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	1890 All Other	1862 All Other	1890 All Other
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

A variety of activities both educational outreach and applied research will be undertaken. Applied research will focus on both "best management practices" for Nevada as it relates to the areas of emphasis. Educational outreach will include publications, use of web and distance education technology,

as well as traditional teaching methods where feasible. Demonstrations and hands on experience are also emphasized.

2. Brief description of the target audience

The target audience is multiple and varied. It includes both youth and adults but primarily adults.

1. Nevada land managers both public and private.
2. Stakeholders interested in natural resource related issues (public land managers, land owners, community leaders, public land users, etc.).
3. Community leaders, fire services, homeowners and others concerned with wildfires and mitigating impact of wildfires especially along the urban-rural interface.

Youth are also a target focus but not the primary focus of programming.

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

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

Patent Applications Submitted

Year: 2013
 Actual: {No Data Entered}

Patents listed

{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	{No Data Entered}	{No Data Entered}	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Individual land managers and private land/home owners reached directly with information about how to live more safely in high fire hazard environments.

Year	Actual
2013	0

Output #2

Output Measure

- "Living with Fire" website hits.

Year	Actual
2013	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number learning best management practices for "living with fire" and wildfire hazards.
2	Number of best management practices site evaluations performed on private property in the Lake Tahoe region to protect the water quality of Lake Tahoe.
3	Rangeland owners and managers learning new knowledge and skills to manage rangelands.

Outcome #1

1. Outcome Measures

Number learning best management practices for "living with fire" and wildfire hazards.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #2

1. Outcome Measures

Number of best management practices site evaluations performed on private property in the Lake Tahoe region to protect the water quality of Lake Tahoe.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code Knowledge Area

{No Data} null

Outcome #3

1. Outcome Measures

Rangeland owners and managers learning new knowledge and skills to manage rangelands.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
------	--------

2013

0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
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{No Data}	null
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V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}