

University collaborations benefit Nevadans

Tri-college team tackles Steamboat Creek water quality issues

Steamboat Creek—the most polluted tributary of the Truckee River—has high mercury concentrations in both water and sediments. In an effort to reduce bank erosion and nonpoint source pollution to the Truckee, a Steamboat Restoration Plan was finalized by the Steamboat Creek Steering Committee. Construction of a large-scale wetland-flood plain system at the confluence of the Truckee and the creek has been proposed as part of a regional watershed plan.



Photo by Sue Donaldson

Eighth-grade students at Billinghurst Middle School identify and classify macroinvertebrates (bugs) collected from three sites on the Truckee River.

A University team is testing the efficiency of nutrient removal of such a system on Steamboat Creek. Mae Gustin and Laurel Saito from Natural Resources and Environmental

Science, Keith Dennett and Eric Marchand from Civil and Environmental Engineering, and Sue Donaldson with Cooperative Extension are using a small-scale experimental wetland system near the confluence to formulate management strategies that will optimize nutrient removal and reduce the impact of mercury contamination on river ecosystems.

The research component

Scott Brown, Hydrologic Sciences graduate student, measured the total and organic mercury concentrations and nutrient concentrations along a floodplain area of Steamboat Creek near Mira Loma Road during various months in 2004. According to Brown, data analysis to date showed the nutrient and total mercury concentrations increase when the total suspended solids levels go up. Further, organic mercury concentrations increased as stream water temperatures rose—during late summer, organic mercury concentrations were the highest.

A number of other graduate students have participated in this project during the past four years. The project is funded by USDA Cooperative State Research, Education and Extension Service National Integrated Water Quality Program, US EPA, Nevada Division of Environmental Protection, Truckee Meadows

Water Reclamation Facility, Nevada Water Environment Association and cities of Sparks and Reno.

The education component

A curriculum was developed for middle school students to learn about water pollution and wastewater treatment.

“The program focuses on water treatment by both public facilities and wetlands,” said Donaldson, “and we are focusing on teacher training in order to reach students now and in the future.”

Donaldson and Gustin piloted a curriculum with three 8th-grade teachers and 90 students at Billinghurst Middle School. The students participated in a water-filtering activity to simulate soil processing by wetlands, and were introduced to bugs and methods of water quality measurement. A field trip to the research wetlands allowed the youth to test their hypotheses. They were able to measure water quality, use a bug survey and make determinations about the effects of pollutants on water quality. ●



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Steamboat Creek near Mira Loma Road features a floodplain area infested by tall whitetop. Cooperative Extension Weed Warriors removed much of the invasive weed, allowing riparian vegetation to establish.

University faculty and students partner with agencies to serve seniors

Connecting seniors and families with care provider information and appropriate services—instantly and when they need it—is the goal of a new statewide collaboration called Nevada Care Connection.

The Internet-driven system grew out of a partnership between University of Nevada Cooperative Extension and the Sanford Center for Aging, funded by the Nevada Division for Aging Services, that includes eight other collaborating grantees throughout the state.

Project co-leader Claudia Collins, Cooperative Extension specialist, said their approach is to keep elders and their caregivers and providers well-informed about wellness issues and services by providing easy access to information through a single point of entry.

“We want to improve seniors’ quality of life and add life to their years,” said Teresa Sacks, project director at the Sanford Center, “particularly since Nevada has the fastest growing senior population in the nation.”

Lauren Tingey, project director of Sanford Center’s Medication Management, helped develop a curriculum and training manual for a “train-the-trainer” model.

In the Washoe County pilot project, four kiosks enable seniors to touch the screen or make a phone call to access local or regional information, through nveldercare.org. In Clark County, nearly 2,000 requests for services have already been received from southern Nevada elders. ●

Sanford Center for Aging’s Larry Weiss and Teresa Sacks show Reno senior Alice Steele how to access services through a kiosk at Raley’s Robb Drive market.



Photo by Jean Dixon

Medical school residents educate young moms about breastfeeding

We live in a nation where the prevalence of childhood obesity has increased dramatically. Nevada’s School of Medicine and Cooperative Extension nutrition specialist Madeleine

Sigman-Grant are trying to do something about this alarming trend.

Nationally known as an expert in the field, Sigman-Grant has established Childhood Obesity Prevention in Nevada. One aspect of this umbrella program—Mom’s Special Gift (MSG)—focuses on breastfeeding in order to influence a young child’s relationship with food during infancy. Funded by the USDA Food Stamp Program and Clark County, MSG targets southern Nevada health professionals who see low-income mothers and pregnant women receiving Medicaid.

“Breastfeeding greatly decreases infant disease rates and improves maternal bonding,” said Sigman-

Grant, “so it’s critical to provide prenatal information to these mothers and continue support during the early weeks postpartum to maximize breastfeeding duration.”

Sigman-Grant distributed more than 10,000 breastfeeding fact sheets, and trained a dozen School of Medicine pediatric residents, 16 public health nurses and eight hospital nurses.

“Compared to the early cessation of breastfeeding among low-income women (within the first three weeks), two-thirds of MSG participants nursed beyond that period,” reported Sigman-Grant. “Furthermore, 57% nursed for more than three months.” The pediatric residents counseled more than 100 women about breastfeeding and said they were very well prepared for this task. ●



Cooperative Extension nutrition specialist Madeleine Sigman-Grant trains Dr. Jeff Ho, a first-year pediatric resident with the School of Medicine in how to encourage young mothers to begin and continue breastfeeding.

Photo by Marilyn Ming

Lake Tahoe collaborations yield results

Through collaborations between University faculty and students, DRI, UC-Davis and agency personnel, progress is being made in basin-wide networking and coordination of educational and research programs at Lake Tahoe, reported John Cobourn, University of Nevada Cooperative Extension water resource specialist.

The Cooperative Extension-led Lake Tahoe Environmental Education Coalition (LTEEC), a group of 30 agencies, educational organizations and non-profits, count these impacts to date:

- More than 5,000 people have received Best Management Practices site evaluations on their properties and Certificates of Completion awarded by the TRPA;
- Four annual Snapshot Days drew nearly 300 people each to take water samples and monitor streams;
- Nearly 17,000 copies of the *Home Landscaping Guide for Lake Tahoe and Vicinity* were distributed;
- Two biennial Lake Tahoe Research Symposia drew more than 200 researchers and agency staff;

“The efforts of University of Nevada Cooperative Extension faculty at Lake Tahoe have been simply superb. This education has been a major reason for continued strong public support for protection of the lake, but it has also helped show the importance of research to better understand threats to the lake. This strong voice has tied a variety of programs together and provided interpretation of the technical issues that is very much appreciated by the research community.”

Glenn Miller, professor of Natural Resources and Environmental Science

- The 90-second Lake Tahoe Report, aired weekly on KOLO-TV and KOH radio, is seen by 40,000 people nightly; pre- and post-tests reveal it's educationally effective and entertaining.

LTEEC was named the 2004 Environmental Program of the Year by the Parasol Community Collaboration at Lake Tahoe.

As a result of coordinated efforts by the Tahoe Weed Group, facilitated by Cooperative Extension's Sue Donaldson, nearly 2,000 basin miles were surveyed, 157 previously mapped infestations treated and 161 new infestations treated. Fewer new weed infestations are popping up, indicating the group is preventing the spread of weeds at the lake.

Just a few of the many University researchers working at Tahoe are: Glenn Miller, professor of Natural Resources and Environmental Science, active in the symposia and educational Steering Committee; and John Kleppe, Electrical Engineering Chair, involved in Snapshot Day and other projects.

For more information on Tahoe collaborations, log on: www.tahoe.unr.edu and www.lteec.org. ●

University collaborations

Collaboration is not a new concept for University of Nevada Cooperative Extension. Since 1914, we have partnered with outside agencies, organizations and volunteers. In recent years, our college has joined with faculty, staff and students in other colleges and institutions to bring educational and research programs to Nevadans, their communities and their environment. This publication highlights a sampling of those efforts that have made a difference to our state's citizens.

John Cobourn, Cooperative Extension water resource specialist, and Heather Segale, former LTEEC coordinator, now Public Information Representative for the Tahoe Environmental Research Center, sample water at Lake Tahoe.

Unique Center addresses water issues in the Las Vegas Valley

Tucked between burgeoning new housing developments, the 30-acre Center for Urban Water Conservation is filling a niche in the Southwest by addressing water issues that help managers keep up with the incredible Clark County population growth.

“Because of the tremendous collaborations we have with faculty and students at UNLV, the City of North Las Vegas, Bureau of Land Management and Southern Nevada Water Authority, we’re able to conduct research to help policy makers develop good water-allocation decisions,” said Dale Devitt, University of Nevada Cooperative Extension specialist and professor of Natural Resources and Environmental Science.

Devitt oversees these projects in partnership with other University researchers, DRI and UNLV scientists and students:

- Researching the long-term use of effluent vs. municipal water on golf course landscapes, and evaluating water-management options under drought emergency conditions;
- Testing and ranking tree, shrub and groundcover species for their suitability in landscapes irrigated with effluent (reuse water);
- Comparing water use on residential landscapes with and without remotely controlled ET irrigation clocks;

- Estimating the basin evapotranspiration (water discharge) for Spring Valley and White River Valley; and
- Studying the impact of climate change, particularly extreme rainfall events, on soils and vegetation at radioactive waste disposal sites.

“I’m very excited about the opportunity to pursue a career in water modeling by assessing how water movement may threaten the integrity of stored waste containers,” said Brian Bird, a UNLV graduate student in Water Resource Management.

Cooperative Extension faculty and staff utilize these research results in classes for homeowners, agency personnel and landscape industry professionals. Master Gardener volunteers maintain an orchard on Center property that is open to the public.

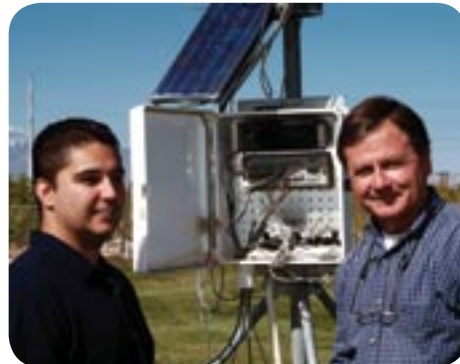


Photo by Ernie Spickler

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Project funders include Cooperative Extension, the Nevada Agricultural Experiment Station, Department of Energy, Las Vegas Valley Water District and Southern Nevada Water Authority. ●

UNLV graduate student Brian Bird and University of Nevada, Reno professor Dale Devitt demonstrate the use of satellite weather stations for evapotranspiration (ET) research projects.

Photo by Paul Palmer



Your Beef's at Stake!

Cooperative Extension teamed up with the College of Agriculture, Biotechnology and Natural Resources, and other sponsors, to bring a unique hands-on beef quality class to several dozen cattle producers in Spring 2005.

The intensive course took cattle from a live basis to retail cuts in order to improve the quality, consistency and marketability of beef. Ranchers attended a series of four compressed video workshops, culminating in a two-day program at the University's Wolf Pack Meats facility where producers participated on the harvest floor, in the cooler and at the cutting table.

"I've been raising beef all my life," said Susan Moses, who pastures cattle in Genoa and Oregon, "but I don't have the ability to grade carcasses for meat. This class will help me cut beef a little better."

Ron Torell, Cooperative Extension livestock specialist, commented, "I could not have completed this class without the help of Bob Butler at Wolf Pack Meats. Working with Bob was a great professional experience—he and his associates provided us with the tools and knowledge for the hands-on work." ●



Program sponsors include:

The Nevada Cattlemen's Association

Nevada Beef Council

Snyder Livestock and Bulls for the 21st Century

Hone Registered Angus and Gelbvieh Ranch.

Cooperative Extension livestock specialist Ron Torell explains how to evaluate a carcass in the Your Beef's at Stake program at the University's Wolf Pack Meats facility.

Photo by Jean Dixon

MBA students develop marketing plan for Virginia City

"Virginia City – Read about it or live it!" is the slogan suggested by the Reynolds School of Journalism students in Professor Bourne Morris' undergraduate copy writing class. They developed ads and billboards based on a Virginia City Marketing Plan created by five MBA students under the guidance of Judy Strauss, associate professor and chair of Managerial Sciences.

"The students did an excellent job of identifying tourism marketing opportunities for Virginia City," said Strauss. "It was a particularly challenging project because VC leaders represent diverse constituent groups. The students learned how to maneuver this political landscape brilliantly – their final plan was received by all as a 'wake-up call' that the

various groups need to work together more closely.

"In addition," continued Strauss, "the students learned how to plan, conduct and analyze primary research to guide their marketing strategy."



The annual Camel Races is one of the many opportunities for enhancing tourism in Virginia City.

Barbara Klipfel, Suzanne Lynn, Anish Patel, Jackie O'Connor and Hee Yoon recommended that VC leaders promote the historic and scenic beauty aspects of the community; focus on repeat visitors; increase tourism and public relations by 10%; develop a central bulletin board and Web site; and pursue grant funds for town improvements.

Tom Harris, Cooperative Extension state specialist and Resource Economics professor, believes this effort is a first step by students to reach out beyond Reno into the rural communities. Several years ago, he and Cooperative Extension's Mike Havercamp helped Storey County citizens envision their future, including tourism opportunities, the V&T Railroad and a wild horse center. ●

University team and Elko student partner to change young lives

Genny Albitre – a 49-year-old grandmother completing a Bachelor of Arts program at Great Basin College – found an internship that would give her practical experience in the social sciences. Having been a teacher’s aide, a special education tutor and a Spanish instructor, she was no stranger to troubled youth.

Under the auspices of Cooperative Extension instructor Linda Struble, Albitre helped lead two, 20-session Project MAGIC classes attended by court-mandated, first-time juvenile offenders in Elko. MAGIC is a national award-winning intervention program that helps high-risk adolescents, aged 12-18, become productive citizens and stay out of the justice system.

Directed by Cooperative Extension youth development specialist Marilyn Smith and Bill Evans, Human Development and Family

Studies associate professor, MAGIC is a model in how faculty and students collaborate to create a better program than one individual could manage alone.

Essential to the team approach are:

➤ **Gus Hill.** The Educational Leadership associate professor is the “numbers guy” who assists Smith in survey preparation, data collection, entry and analysis. “Our successes in providing ongoing grant funding (\$2 million to date) is directly related to Gus,” said Smith.

➤ **Matt Leone.** This Criminal Justice associate professor keeps the instructors aware of the latest developments in the juvenile justice field to help them understand the issues youth and families are facing.

MAGIC has graduated more than 3,000 Nevada families, with a long-term savings to taxpayers of an estimated \$5.4 million in incarceration costs for the program

Great Basin College senior Genny Albitre helps Project MAGIC youth learn problem-solving skills in the areas of communication, anger management, drug and alcohol awareness and community involvement.

participants. Recent pre- and post-surveys indicate positive changes in the use of alcohol, tobacco and other drug use as a result of the program.

“My experience with MAGIC has made me less judgmental,” observed Albitre. “This internship has allowed me not to judge the influences resulting in choices made by youth, but to focus on the skills that will be more profitable for them from here forward.” ●



Photo by Linda Struble



Teens experience University life at 4-H College and Careers event

More than 50 statewide Nevada youth and their chaperones attended the 2004 4-H College and Careers to learn more about the University experience. Cooperative Extension developed the three-day event with the Office of Prospective Students and college student advisors.

The teens toured our campus with the University Ambassadors, one of whom was

a former 4-H Ambassador. Representatives from academic units, including WNCC, conducted round table discussions about programs and degree options. University staff discussed enrollment, financial aid, student life, scholarships, studies abroad, and student clubs and activities.

General tours were offered as well as tours of four colleges: Agriculture, Biotechnology and Natural Resources; Education; Engineering;

and Science. Agriculture featured a demonstration on how to separate the DNA of a strawberry.

“I would recommend this event to anyone, whether you have made up your mind about a University or not,” advised Taylor Adams, a 4-H member from Las Vegas. “One thing is sure,” continued Adams, “when I send out my letters for colleges, the University of Nevada, Reno will definitely be one of my choices, if not my first!” ●



Photos by Andrew Munk



(Left) Prospective future students attend 4-H College and Careers to learn more about University life and college programs.

The teens learn trust and leadership skills in an exercise at 4-H College and Careers.