

PROGRAM IMPACTS (CONTINUED)

SCHOLARSHIP AND RESEARCH RELATED TO EXTENSION PROGRAMMING IN HUMBOLDT COUNTY

Schultz, B. 2019 *Forage Loss Assessment for Nevada*. Technical Report to the USDA Farm Services Agency. 28 p. December 23, 2019.

Perryman, B.L., **B.W. Schultz**, M. Burrows, T. Shenkoru, and J. Wilker. *Fall-grazing and grazing exclusion effects on cheatgrass (Bromus tectorum) seed bank assays in Nevada, USA*. Rangeland Ecology and Management. 73:343-347.

Perryman, B.L., **B. W. Schultz**, and P. Meiman. (submitted). *A Change in the Ecological Understanding of Rangelands in the Great Basin and Intermountain West, and Implications for Management: Revisiting Mack and Thompson (1982)*. Rangeland Ecology and Management.

Schultz, B., B. L. Perryman, S. Swanson G. McCuin, D. Voth, P. Novak-Echenique and P.T. Tueller. 2020. *Ranchers’ Monitoring Guide*. UNCE Special Publication. 20-03. 70 p.

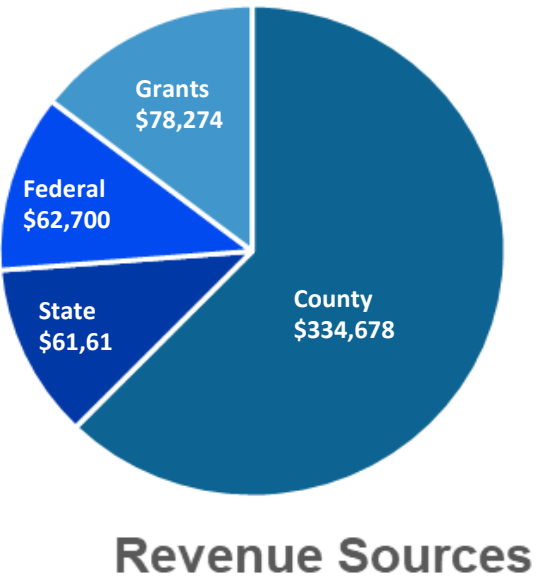
Schultz, B.W., B. Perryman, and E. Thacker. 2019. *Rangeland Plants: Development, Growth and Physiology*. Rangeland Ecology and Management Short Course, Samarkand State University, Samarkand, UZ. September 26-October 5, 2019.

Stewart, K. (PI), K. Shoemaker (Co-PI), and **B. Schultz** (Co-PI). 2020. *Identification of Migration Corridors and Movement Patterns of American Pronghorn*. UNR Hatch. NeV05306. \$135,200.

FISCAL YEAR 2020 (JULY 2019-JUNE 2020)

Total Revenue	\$ 537,270
Approved County Budget	\$ 334,678
State Funds	\$ 61,618
Federal Funds	\$ 62,700
Grant Funds	\$ 78,274
Total Expenses	\$ 483,371
County Funds	\$ 300,461 ^a
State, Federal and Grant Funds	\$ 182,910
FY 2019-20 Balance	\$ 53,899
County Ending Fund Balance	\$ 981,039

^a An estimate based upon based upon known expenses through the end of the fiscal year. Final data not yet available from Comptroller’s office. An additional County contribution includes the in-kind value of approximately \$450,000 for buildings and facilities (annual lease value), and administrative support. The value shown includes approximately \$118,604 from the property tax assessment and \$181,857 from the Cooperative Extension Ending Fund Balance.



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Annual Report | Fiscal Year 2020 (July 2019 - June 2020)

University of Nevada, Reno Extension is engaged in Nevada communities, presenting research-based knowledge to address critical community needs in the areas of agriculture; children, youth and families; community and economic development; horticulture; health and nutrition; and natural resources. It is a county-state-federal partnership providing practical education to people, businesses and communities. It is a unit of the University’s College of Agriculture, Biotechnology & Natural Resources, and plays a vital role in fulfilling the University’s land-grant mission.

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PROGRAM IMPACTS

RANGELAND RESOURCES

- Rangeland education program had at least 701 student contacts.
- Continued participation in the following collaborations: a) Jordan Meadows and Kings River Collaborative Grazing Management processes; b) the Santa Rosa Range Management program; and c) the North-central Nevada Sage-grouse local work group. Extension Educator, Brad Schultz’s role is to ensure that participants have the appropriate peer reviewed research available to help inform discussions and decisions.
- Extended programing developed to address rangeland management issues in Nevada, with respect to plant physiology and grazing, and, grazing and browsing management to international audiences participating in the USFS International Programs Livestock grazing seminar, as well as Samarkand State University, Samarkand, Uzbekistan graduate students.
- Continued the Santa Rosa Mountains “repeat photography study” See photos at right.
- Conducted a state-wide forage-loss assessment to meet USDA Farm Services Agency Insurance Program requirements.
- Reviewed livestock grazing literature with respect to impacts on cryptobiotic crusts and summarized a rebuttal (in peer review) to a 40-year old paradigm that biotic crusts are few on arid rangelands across the sagebrush steppe due to livestock grazing.



Cabin Creek, Santa Rosa Mountains in 1975 (top) and 2020 (bottom). Large increase in willows along stream, which is no longer visible.

PROGRAM IMPACTS (CONTINUED)

NOXIOUS AND INVASIVE WEEDS

Noxious and invasive weeds are widespread throughout Nevada and threaten the productivity of cropland, pasture and rangeland. The Humboldt County Extension Educator interacts with the Paradise Valley Weed Control District, the Humboldt Watershed Cooperative Weed Management Area, Nevada Department of Agriculture and the Nevada Conservation Districts.

- The Humboldt County Commission continued to supplement the Extension budget (\$25,000) for weed control and management efforts. These resources helped implement weed control efforts on several thousand acres in fiscal year 2020, and addressed a significant infestation of medusahead in the right-of-way of county roads in the Paradise Valley Weed Control District and the Quinn River Conservation District.
- Brad Schultz participated in weed management workshops in Winnemucca, Orovada, Lovelock and Elko. He made educational presentations about the different life-forms of weeds; their different root systems; their annual growth patterns; and how these attributes influence carbohydrate flow at different growth stages. Also discussed were weed seedbanks and options and management. This information is critical for the successful management of hard to control deep-rooted, complex perennial forbs (i.e., buds on both the roots and root crowns). This education informs students about the importance of properly timing herbicide treatments for each species, and the need for a long-term follow-up control program.
- Completed draft manuscripts, for peer review, for three different weeds in a 26-part series about priority agricultural weeds in Nevada.



Medusahead (top) and hoary cress along road (bottom) near Paradise Valley. County funds facilitate treatment of these infestations.

4-H

- Hired a part-time 4-H program assistant to improve programming in the rural communities.
- The Humboldt County 4-H Program included 25 traditional 4-H clubs, 25 volunteer leaders and 243 traditional club members. 4-H youth exhibited 162 projects in FY 2019-2020. Four volunteers left due to the Covid-19 induced shut down, and 12 clubs finished their project year due to various restrictions on indoor meetings.
- Hosted annual 4-H awards evening and banquet, which had 132 participants (November 2019).
- After-School 4-H programming reached approximately 217 youth in grades K-4, prior to shut-down.
- Participated in the second State 4-H Annual Survey.
- Humboldt County 4-H was the host county for the 2019 State 4-H Expo and 4-H State Shooting Sports Match, held in October 2019.
- Presented carcass data for all Humboldt County 4-H market animals and discussed acceptable and desired carcass characteristics including which carcass attributes receive a premium price, the value of each animal on the market grid, explanations for why each animal received its respective grade, and suggestions about how to improve carcass quality.
- Moved club programming to virtual platforms during the COVID-19 shutdown – March through June.
- Hosted 4-H small animal orientation via zoom for participants and other interested youth.

4-H AND YOUTH IN ACTION

- Continued to work with volunteers and committees to provide accurate information on changing guidelines and requirements during Covid-19 to facilitate continued 4-H programming and events.



SUPPORT FOR OTHER EXTENSION AND COMMUNITY PROGRAMS

- Nevada Economic Assessment Project (NEAP) completed two technical reports and five fact sheets. Available at: <https://extension.unr.edu/neap/program.aspx?ID=176>
- The Humboldt County Extension Office addresses various horticultural issues that affect County residents, and disseminates research based materials to help resolve those issues and educate the public.
- The Extension Office hosted the *Grow Your Own Program* which originates from the Washoe County Extension Office.
- Extension faculty with statewide youth development roles have developed the *Just in Time Parenting* program which the Humboldt County Extension Office assists in implementing via dissemination of research based publications and materials.
- The Humboldt County Extension Office distributes home radon testing kits and disseminates literature about the dangers of radon gas, a primary cause of lung cancer among non-smokers.
- The Extension Educator assists with community development by residing on the Board of the Humboldt Development Authority (Vice-Chair).
- Secured county funding to correct the structural defects and safety hazards in the Extension Office's concrete floor. Installed new flooring, and purchased equipment and supplies to improve delivery of Extension programming. Photos at the right show the elevated slab curl ridge in the floor (top) prior to grinding down, replacement of nearly 40-year old carpet, and other improvements to create a professional looking environment.

