

Rangeland Center ANNUAL REPORT 2023



University of Idaho
Rangeland Center

rangelandcenter.org

Rangeland Center Staff



Jason Karl
Director



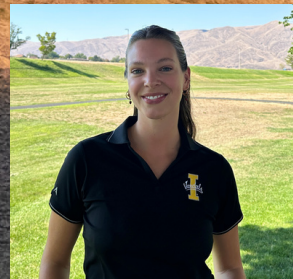
Tim Prather
Senior Associate Director



Eric Winford
Associate Director



Patience Mateer
Center Administrative Support



Jacqueline Snow
Communication

Partners Advisory Council 2023

Chair

Anna Owsiak Regional Habitat Manager, Idaho Department of Fish and Game

Vice Chair

Mike Courtney Twin Falls District Manager, Bureau of Land Management

Council Members

Mark Davidson Director, Blaine County Recreation District

Darcy Helmick Land Manager, Simplot Land & Livestock

Matt Lucia Executive Director, Sagebrush Steppe Land Trust

Tim Murphy Commissioner, Idaho Department of Fish and Game Director

Jerald Raymond Rancher/Cattle Breeder and Consultant, Idaho Rangeland Resource Commission

Royce Schwenkfelder, Rancher

Susan Buxton Director, Idaho Department of Parks & Recreation

James Hagenbarth, Rancher

Tina Ruffing Rangeland Management Specialist, US Forest Service Intermountain Region

Caroline Nash Principal, CK Blueshift

Science and Solutions for the Range

The Rangeland Center focuses research and outreach around the five topic areas outlined in our strategic plan, emerging topics identified in meetings, and emphasis areas suggested by our Partners Advisory Council (PAC).

Rangeland Center Strategic Plan Update -The Center's 5-year strategic plan received an update this year following discussions with over 80 rangeland stakeholders. Center staff discussed emerging challenges facing Idaho's rangelands and the communities that rely on them at seven locations throughout the state plus a virtual option. These discussions helped Center staff, members, and our Partners Advisory Council evaluate the focus areas for our research and outreach efforts.



Idaho Rangeland Fall Forum -Center staff worked closely with the UI McClure Center for Public Policy and members of our Partner Advisory Council to plan and conduct the 2023 Fall Forum. The theme of this year's forum was "Wrangling Recreation for Solutions," and it was held in Nampa and Boise on October 5th and 6th. The Forum had three sessions inviting panelists to discuss "Recreation's Impacts - Navigating Challenges to Solutions," "Collaborating towards Solutions," and "Taking Solutions to the Next Level." On the 6th, participants visited the Hillside to Hollow Reserve and the Hawkins Range Reserve to learn about on-the-ground challenges and approaches pursued by Ridge to Rivers.

Stream and Mesic Meadow Restoration -Center staff played a central role in a project evaluating the effectiveness of low-tech process-based stream restoration techniques. The research project finished gathering data at two sites this year, one at the Rinker Rock Creek Ranch and another at Hawley Creek near Leadore, ID. Outreach efforts tied to this research included field trips with the Idaho SRM, a Sagebrush Saturday event, and classes with UI students.



Idaho Range Livestock Symposium -The Idaho Range Livestock Symposium was held in Homedale, Twin Falls, and Idaho Falls in 2023, with a virtual viewing option. This year's agenda focused on E. coli in rangeland streams, green energy challenges for rangeland management, strategies for managing high feed and production costs, new virtual fence technologies for western range, and herd health issues. For 2023, the Symposium drew over 120 participants during its three days.

Science and Solutions for the Range

Sage-grouse and Grazing Research -The research team on this project, led by Courtney Conway, finished its 10th and final year of gathering data this summer. Initial results show that moderate spring grazing has no effect on sage-grouse nest success, and insect biomass increases. More information is available on the project website at <https://idahogrousegrazing.org/>.



Dormant season grazing to reduce annual grasses and promote perennial grasses - In 2019, a number of Center Members, including Jim Sprinkle, Karen Launchbaugh, and Katie Lee, designed and implemented this project with the USFS Caribou-Targhee National Forest. Graduate students Dan Lauritzen and JB Playfair are leading the analysis of the data.



Recreation Impacts and Monitoring - Center Director Jason Karl is leading a team to explore how different low-cost monitoring approaches can be used to provide valuable information for management and help agencies understand and manage recreational uses on rangelands. Dr. Karl and Center faculty member Dr. Chris Zajchowski brought on a new Master's student, Jacqueline Snow, to complete a synthesis paper on recreation impacts on rangelands and to develop a more comprehensive recreation monitoring plan for the Ranch.

Virtual Fence Technologies - Karen Launchbaugh and Jason Karl worked with an interdisciplinary team of faculty and students to design and test elements for a virtual fencing system. In 2023 this team developed and field-tested a prototype. Center member Melinda Ellison is also leading a virtual fence project evaluating the ability of the technology to manage livestock grazing in burned areas.



Herbicides and sage-grouse habitat -Center members Tracey Johnson and Tim Prather, along with their student Kirby Lau, researched whether a new herbicide that targets invasive annual grasses would affect non-target species, especially those that sage-grouse prefer. This project, funded in part by the David Little Livestock Range Management Endowment, will publish results in 2024.

Science and Solutions for the Range

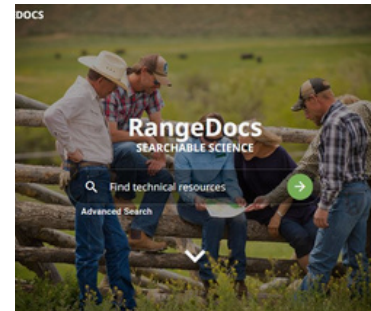
Providing Rangeland Information -Eric Winford, with Center members Karen Launchbaugh and Jim Sprinkle are developing a systematic review of the current science on grazing post fire. Graduate student Jacqueline Snow, under the mentorship of Jason Karl and Chris Zajchowski, is working on a synthesis of impacts of recreation on rangelands. We are looking to these efforts to be a template for syntheses on additional high-priority topics in the future.



National Society for Range Management Annual Meeting -

In 2023, the SRM traveled to Boise to hold its annual meeting, bringing over 1,500 land managers, producers, scientists, and other rangeland stakeholders together in one place. Center staff, members, and affiliated students participated on the planning committee, organized several sessions, and presented research. Presentations included investigations into fuel break effectiveness, methods for controlling annual invasive grasses, approaches for evaluating stream restoration, and many more.

The Rangeland Partnership - The Center continued to engage with the Rangeland Partnership, an organization of rangeland extension specialists and librarians who provide public and private land managers, researchers, Extension professionals, educators, and the public with information and tools needed for rangeland management. RangeDocs, a collaborative project between the Center and the Partnership, is an online tool designed for deep searching of search rangeland science documents

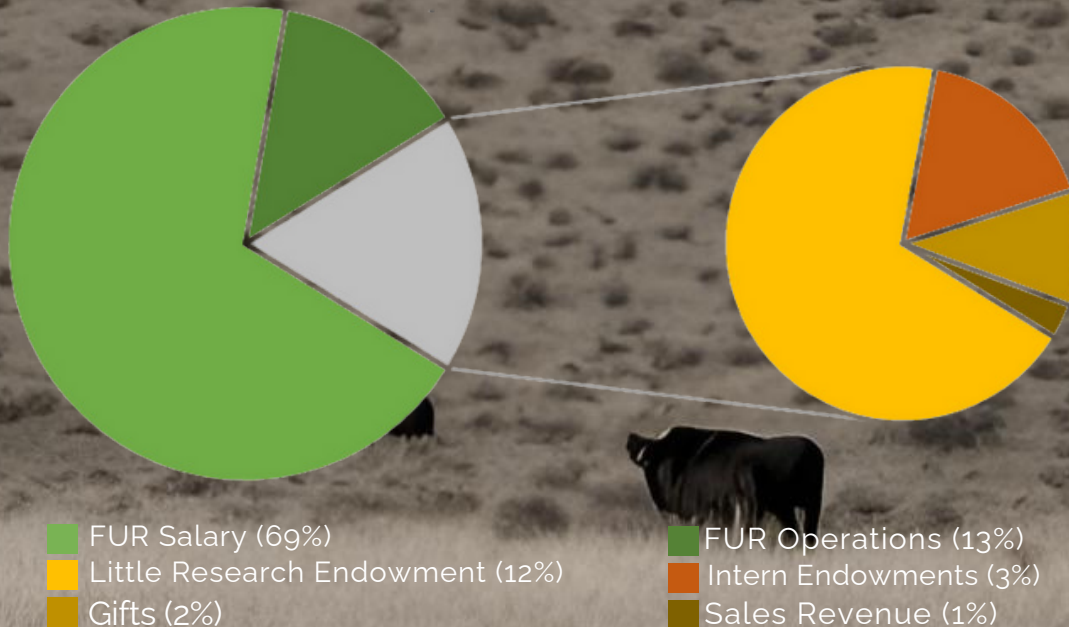


Supporting the Next Generation of Rangeland Managers -

In 2023, the Rangeland Center supported and supervised four undergraduate interns on campus during the academic year. They helped Center faculty with performing tasks such as reviewing articles for multiple science synthesis projects, data entry and quality control for range monitoring programs and assisting with data collection on faculty and graduate student research projects.

Rangeland Center Funding

Distribution of Rangeland Center 2023 Budget



The total 2023 budget for the Rangeland Center was \$225,609. The primary budget for the Rangeland Center is provided by state legislative funding to the College of Natural Resources' Forest Utilization and Research (FUR) program. FUR funding to the Rangeland Center totaled \$189,392 for the 2023 calendar year. This included \$158,488 to support the Center Director, Associate Director, and Communications Director positions, and \$30,944 for operations and travel.

The Rangeland Center administers four endowments for research and student internships. The David Little Livestock Range Management Endowment, which provided \$27,977 to support three projects in 2023, funds research, extension, and education into more efficient uses of Idaho's rangelands for livestock forage production. Endowments established by the Soulen, Little, and Brackett families provide funding for Rangeland Center interns. In 2023, these endowments yielded \$6,961 to support 4 students each semester working 10 hours per week to assist faculty and conduct projects that helped maintain the Center.

Donations to the Rangeland Center in 2023 provided \$4,248 in funding that was used to support student research, project or meeting travel for Center members, and other Center activities and needs that cannot easily be funded through the FUR budget.

The Center also receives revenue from tickets to events or the sale of books. Ticket revenue from the Fall Forum generated \$1,120 in 2023. Sale of books such as the Field Guide to Idaho Grass and Grass-like Plants and the Backpack Guide to Range Plants, earned \$159 in 2023. These funds are used to support outreach events.

Related Activities by Center Members

Rangeland Center members participate in a vast array of research and outreach projects beyond the support of Center funding or staff assistance. The Center works in various ways to indirectly support these projects such as keeping stakeholders informed about progress and helping to disseminate project results. Range-related projects that were active in 2023 but not directly supported by Center resources included the following:

Project Name	Project Leads (*Indicates Center Member)
Sources of non-sampling error in BLM's AIM program	J. Karl*, L. Dreesman
Evaluating non-target effects of herbicides on sage-grouse habitat	K. Lau, T. Johnson*, T. Prather*
Using virtual fence to manage riparian systems and optimize grazing during early and late season grazing	M. Ellison*, M. Ratterman
Characterizing willow utilization by cattle and large ungulate wildlife	M. Ellison*, J. Yelich
Does protein supplementation in fall increase digestibility and amount of invasive annual grasses grazed by?	G. Chibisa, S. Jensen*
Budget management for cow-calf ranchers.	H. Tejeda*, J. Hall*
The economics of grazing production systems on public v. private lands.	J. Hall*, H. Tejeda*
Identifying sheep with bitter-taste sensitivity and their relative feeding/foraging behavior	M. Ellison*, C. Southerland
Winter grazing medusahead	S. Arispe, A. Hulet, S. Jensen*, W. Price
Sheep and goat monthly webinar and Facebook group	M. Ellison*, C. Wilmore*, W. Stewart, C. Page
JournalMap.org - A geographic-based search engine for scientific literature	J. Karl*, J. Kenyon, T. Varrelman, L. Shenneman, L. Olsen
Effects of broadscale juniper removal on sage-grouse and non-target species, including sage-grouse nest predators	T. Johnson*, S. McIntire
Using thermal imaging drones to understand effects of beaver dams on in-stream temperatures	M. Steinwurtzel, J. Karl*, Brian Kennedy
RangeDocs: making range science searchable	A. Dalke, J. Karl*, M. Thorne, J. Pfander, E. Winford*, K. Launchbaugh*, S. Merrigan, M. King

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The mission of the Rangeland Center is to create knowledge and foster understanding for the stewardship and management of rangelands.

rangelandcenter.org

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