# Yale SCHOOL OF THE ENVIRONMENT

# Developing CCALT's Agricultural Resiliency Fund: Enhancing Ecological Values and Agricultural Viability on Colorado Rangelands

## Kathleen Voight, MESc '24

## The Need.

If recent trends continue, 417,500 acres of Colorado's farmland and ranchland will be lost to non-agricultural uses by 2040, according to the American Farmland Trust. Agricultural land trusts, such as the Colorado Cattlemen's Agricultural Land Trust (CCALT), are essential to keeping land in agricultural use and ensuring a robust future for rural economies and healthy landscapes. Conservation easements, often utilized by land trusts, are an effective, legally binding tool for protecting agricultural land in perpetuity. However, maintaining ecological values often requires active management that extends beyond the one-time establishment of a conservation easement. CCALT's Agricultural Resiliency Fund (ARF) is an internally-managed fund that provides resources to landowners to improve ecological values and agricultural viability on ranches that are under a CCALT easement. The ARF allows CCALT the opportunity to support landowners' responsible stewardship and active management of Colorado's rangelands. Effective management is essential to improving the resiliency of landscapes and agricultural operations that are vulnerable to a changing climate and increasing development.

## The Project.

Kathleen's work built upon the research completed by a group of UHPSI research assistants who previously worked with CCALT and recommended identifying priorities within CCALT's Additive Conservation program prior to establishing the ARF. To support this recommendation, Kathleen conducted interviews with the five Additive Conservation subcommittee members of CCALT's Board of Directors to identify priorities for the program, which then informed funding priorities for the ARF. With funding priorities identified, Kathleen created multiple documents that CCALT will use to establish and implement the ARF. Documents created include 1) the ARF landowner application, 2) the scoring matrix used



The ARF will support projects that contribute to grassland health. These may include seeding projects that promote species diveristy, which improves soil heath and forage nutrition.

to assess applications, and 3) a process document that records the process used to build the ARF and suggests additional reviews for future rounds of funding.

## The Findings.

Kathleen identified three top funding priorities for the ARF; 1) improving and updating water infrastructure, 2) improving forest health and 3) mitigating wildfire danger, and improving grassland health and grazing efficiency. These priorities, which identify urgent management needs across the state, will directly inform how CCALT will allocate funding. Kathleen collaborated closely with the Additive Conversation subcommittee to establish the structure and timeline for the implementation of the ARF. Kathleen also created an outline to reassess priorities, scoring matrices, and award sizes for future ARF funding rounds. CCALT awarded a first pilot round of ARF funding during the Spring of 2023. Kathleen will continue to work with CCALT to assess and revise the funding process following the completion of the pilot round.

## The Impact.

Following the spring 2023 pilot round, CCALT will award ARF funding on an annual basis. Awarded funding will support improvements to irrigation infrastructure, thinning of wildfire-prone forests, seeding of native grasses, and other stewardship needs that landowners identify. Updated irrigation infrastructure can improve efficiency and preserve water on drought-impacted agricultural operations. Forest thinning can provide fire breaks and slow the spread of uncontained wildfires, while promoting forage for livestock and wildlife. Native grasses can provide wildlife habitat, build healthy soil, and stave off invasive annual grasses that threaten huge stretches of the West. As the effects of climate change and ongoing drought intensify across the West, responsible stewardship and proactive management are essential to improving the health and resiliency of rangelands. Funding sources like the ARF are critical to accomplish this and achieve multi-beneficial outcomes that support agricultural operations and enhance ecosystem services on working lands. The research Kathleen conducted with CCALT supported the establishment and timely implementation of the ARF, which will support landowners, cattle operations, and rangelands across Colorado.

## The Student.

Kathleen Voight, Research Assistant and Western Resource Fellow | Kathleen Voight is a Master of Environmental Science candidate focused on the conservation and management of working lands in the Rocky Mountain West. Her research focuses on agricultural viability, resiliency, and drought adaptation in livestock grazing systems in southern Colorado. Prior to matriculating at the Yale School of the Environment, Kathleen worked in agriculture, conservation, and environmental education. Kathleen holds a BA in History of Art from Yale University and she is a former Rocky Mountain Farmers Union Fellow. In her free time, Kathleen likes to bike, hike, and ski as often as possible. See what Kathleen has been up to. | Blog