Russell L. Rustici Endowed Chair in Rangeland Watershed Sciences
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ENDOWMENT PURPOSE
The Rustici Endowed Chair in Rangeland Watershed Sciences was established in 2008 by the late Russell L. Rustici to give special recognition to the chairholder and provide financial support for his or her teaching, research and outreach efforts. Mr. Rustici was particularly concerned with research that investigates the connections between range management, water quality, hydrology and related ecosystem processes towards the protection and enhancement of California’s Central Valley rangeland landscape.

RESEARCH
The Rustici Endowed Chair funding has contributed to important research findings that support sustainable rangeland management practices in California. Research during the past year focused on watershed geology, soils and hydrology and their role in regulating streamwater flow and water quality. A very important aspect of the past year’s research is documenting the role of natural nutrient (nitrogen & phosphorus) sources contributing to rangeland watersheds in sedimentary rock and volcanic areas of coastal and northern California. Nutrient-rich stream waters in these areas have long been attributed to livestock grazing and have created a contentious issue with regulators. Documenting the role of natural nutrient sources has transformed the discussion on who is responsible for these streamwater nutrients. In working with county advisors, endowment funding has provided resources for acquiring important data to address soil, vegetation and water quality questions raised by their clientele. In collaboration with campus colleagues, we are preparing a rangeland soil and water resource web site and developing models for predicting forage production and stream runoff in response to future climate change scenarios.
TEACHING
The endowment partially funded one graduate student and a Geographic Information Systems (GIS) research assistant who compiled and synthesized rangeland landscape, soil and water attributes for rangelands statewide. I continue to incorporate my research findings into both graduate and undergraduate courses that have a combined enrollment of about 450 each year. A new Ph.D. student has been recruited and will be supported by the endowment beginning in October 2015.

STUDENTS
One graduate student was partially supported by the endowment this past year to prepare publications on watershed hydrology and soil research that was conducted with previous endowment funding.

OUTREACH
During the past year, I have worked with several county advisors and stakeholders in the cattle ranching community to answer their questions and provide information concerning water quality issues on California rangelands. I have also worked with state and federal scientists and NGOs on rangeland riparian restoration activities on volcanic spring-fed streams in northern California. I participated in the 3rd Rustici Rangeland Symposium and the endowment was a major financial sponsor for this symposium.

LEVERAGING ADDITIONAL FUNDING
The endowment research provided preliminary research results that contributed to a recent NSF award (with Ben Houlton) of $765K to examine the role of naturally occurring nitrogen in rocks throughout California. The research also contributed to a US Bureau of Reclamation contract ($250K) to examine spring fed rivers and ecosystem restoration in northern California rangeland watersheds.

THANKS
I am very thankful for the financial support provided by the Russell L. Rustici Endowed Chair in Rangeland Watershed Science. The support has allowed me to pursue research questions and extension activities that are typically not funded by other sources. It allows me to take research risks that have often resulted in "high" impact research findings that have leveraged additional support from extramural sources. I look forward to continuing research on California rangelands that Russell Rustici saw as a critical need for the sustainability of the California ranching community.