

****Ongoing Work to Quantify Livestock Grazing in The Sagebrush Steppe Using Remote Sensing Data**

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Domestic livestock grazing is the primary land use worldwide, but the influence of grazing on rangeland productivity is difficult to quantify due to its dependence on many environmental and management factors. This study examines the effect of livestock grazing on rangeland gross primary production (GPP) while accounting for effects of environmental variables. Specifically, we use Bayesian generalized linear models (GLMs) to regress field-based grazing intensity data on remotely sensed GPP and environmental covariates. Our preliminary results suggest that the grazing levels in our study area minimally influence short-term rangeland productivity when compared to other environmental variables. Our ongoing work will consider other measures of rangeland productivity (e.g., NPP, NDVI), alternate models, and simulations to improve our predictions. Our findings will provide insight into the relationship between grazing and rangeland productivity for use in grazing management.