

# RANCHING ECONOMICS AND SAGE-GROUSE IN THE WEST

## POLICY RECOMMENDATIONS FOR RURAL DEVELOPMENT

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### INTRODUCTION

The Greater Sage-Grouse is a sagebrush obligate species being considered for listing under the Endangered Species Act. While the listing as a threatened or endangered species has not yet occurred, the U.S. Fish and Wildlife Service has designated the species with its Warranted but Precluded category and will be making a final decision in the near future. State, Federal, and private landowners are working together to develop proactive policies and activities to help this species. Regardless of a listing decision, changes are being made on the way livestock are grazed, especially on public lands. Actual listing will further affect how millions of acres of land across the western U.S. are managed. Cattle ranchers operate over much of this landscape. Proactive policies and conservation measures that have been proposed to protect the species include reductions in allowed grazing levels and adjustments in seasonal grazing use, particularly during the spring and fall months. Cattle ranchers who may be affected by these policies generally have limited options on how to respond based upon the western land ownership pattern and resulting dependency on public lands for livestock forage. Further, the economic impact on individual ranches will have cascading effects on communities within which they operate.

While there is no disputing that Greater Sage-Grouse populations are lower than they were historically, the causes of that decline are many. Certainly the conversion of land from sagebrush steppe to farms, roads, and towns has reduced potential habitat. Loss of sagebrush from wildfires has exacerbated the trend. Wildfire control activities over the past century have also allowed other woody species such as juniper to encroach and crowd out sagebrush over extensive areas. Activities such as hunting and predators can also have an effect on population levels. Grazing by domestic livestock, wild horses, and wildlife can also have an impact on habitat availability and quality.



This paper is based upon the results of an economic study of representative<sup>1</sup> ranches in Oregon, Idaho, Nevada, and Wyoming (Torell et al., 2014). The results of that study show the potential economic impacts on these representative ranches from changes in grazing levels on Bureau of Land Management (BLM) managed grazing allotments. The basic premise is that the BLM and other federal agencies should incorporate these economic impacts into the analysis when developing Environmental Impact Statements and other planning documents.

### OPPORTUNITIES

Ranchers have the opportunity to adjust their operations to address issues with sage-grouse management. Each of these options will have differential effects on ranch profitability and the ability of the ranch to stay in business.

Livestock grazing alternatives are being developed throughout the habitat range of sage-grouse. Previous studies have

<sup>1</sup>Representative ranches are developed for a typical operation within a defined geographic area. Their characteristics typically come from beef cattle enterprise budgets.

identified ways that livestock grazing impacts on sage-grouse can be minimized including: 1) maintaining vegetation structure suitable for sage-grouse; 2) implementing pasture rotations and similar techniques to improve livestock distribution and minimize impacts to vegetation; 3) providing seasonal rest from livestock grazing in sage-grouse habitat areas; and 4) by reducing livestock stocking rates (Gunnison sage-grouse rangewide steering committee, 2005; Industrial Economics Inc., 2013). Our economic analysis focused on season-of-use and reductions in BLM grazing permits.

The models we used for the analysis assume profit maximization as the ranch management goal. Previous studies and anecdotal observations have indicated that ranchers do not consider profit as the primary reason they own and operate a ranch. Way-of-life and a place to raise a family are the most significant drivers of ranching decisions. Enough profit is desired to stay in business, but it is not the most important goal. Because of this, the most economically profitable choices defined in Torell et al. (2014) may not be those actually implemented. Our model results<sup>2</sup> are only a first approximation of what would happen if profit-maximizing choices were made. The model results suggest the following policy options and recommendations. It is important to note that based on our analysis, any other choice would result in lower profits and hence make the ranch more vulnerable to adverse impacts. We do not consider economic choices such as selling the ranch or selling conservation easements. Ranchers generally have a strong desire to remain in the ranching business (Gentner and Tanaka, 2002).

### POLICY OPTIONS AND RECOMMENDATIONS

- Ranches are heterogeneous in their characteristics. Because of this heterogeneity, using one representative ranch to depict a whole region oversimplifies the economic and resource impacts to the ranching sector and rural communities. A study by Gentner and Tanaka (2002) indicated at least eight different types of ranches with variable personal goals of ranch owners. Economic models used for policy impact analysis require current cost and return estimates that define the ranch economic situation for representative ranches. The basis for these ranch-level economic models is a basic livestock enterprise budget. These ranch budgets define typical production rates, production practices, and resource use and availability. Lack of this basic cost and return information currently limits assessments of policy impacts for public land ranches throughout the West. Our recommendation is that existing sources within the Land Grant University system and federal

agencies be devoted to developing and maintaining ranch enterprise budgets at the appropriate scale. This would allow for a better representation and definition of the potential impacts on the ranching sector from changes in management and land use policies.

- Early spring forage on ranches is a significant limiting factor for livestock grazing on many western ranches. Cattle have been fed hay all winter and as the grass begins to green up, they tend to lose interest in hay. Good rangeland management practices would indicate that cattle should be kept off this new growth until it has sufficient time to become established (i.e., “range readiness”). Ranchers desire to turn the cattle out as soon as possible since feeding hay is one of the most expensive activities of running a yearlong operation. This desire to have early spring forage accounts for the many hundreds of thousands of acres of grasses such as crested wheatgrass that were planted from the 1950’s to present day. At the same time, this is also a critical time for sage-grouse chick rearing. Our recommendation would be to find economically and socially feasible alternatives for the early spring grazing season besides just extending the winter feeding period.
- Many ranches are dependent upon one or more family members working off-ranch. These income sources are critical to maintaining the way-of-life (and open spaces/sagebrush habitat) these families desire. In many rural communities where the ranches exist, having off-ranch employment opportunities is critical. Hence, economic development activities that create employment opportunities will be essential. In our models, we assumed \$35,000 of off-ranch income that helped cover family living expenses. Our recommendation is that studies of local economies be included in planning documents and that such studies examine the job market and employment diversity and opportunities.
- The BLM has not formally recognized that one of the impacts due to grazing allotment reductions is a change in the value of the ranch. This is a value commonly referred to as permit value. What a rancher pays or receives for a federal grazing permit as part of a ranch sales price is a taxable value. The range of values we estimated were that ranch values would decline between \$150/AUM

<sup>2</sup>Interested readers should go to <http://www.wyomingextension.org/publications/> and search for B-1258 scheduled for publication in May 2014.

Cattle ranchers who may be affected by these policies generally have limited options on how to respond based upon the western land ownership pattern and resulting dependency on public lands for livestock forage. Further, the economic impact on individual ranches will have cascading effects on communities within which they operate.

(Animal Units per Month) and \$350/AUM if the permit were eliminated. Our recommendation would be that federal agencies managing grazing permits formally recognize these impacts on ranch values and disclose them as part of the planning process.

- The National Environmental Policy Act (NEPA, PL 91-190) requires that economic and social impacts of the alternatives must be disclosed (Section 102 of the Act). In many regions of the western U.S. ranching is a significant part of local economies and the social fabric of rural communities. Our recommendation is that the federal agencies fully disclose the social and economic impacts through a full Social and Economic Impact Assessment whenever alternatives are deemed to significantly affect the human environment. To aid in this approach, we further recommend that the federal agencies fully staff planning and management interdisciplinary teams to include economists and sociologists where applicable. 

## REFERENCES

- Gentner, B. J., and J. A. Tanaka. 2002. Classifying Federal Public Land Grazing Permittees. *Journal of Range Management* 55:2-11.
- Gunnison sage-grouse rangewide steering committee. 2005. Gunnison sage-grouse rangewide conservation plan. Denver, CO, USA: Colorado Division of Wildlife. 526 p. Available at: <http://grazingforgrouse.com/sites/default/files/2005%20Gunnison%20Rangewide%20Plan.pdf>. Accessed November 6, 2013.
- Industrial Economics Inc. 2013. Draft Economic analysis of critical habitat designation for the Gunnison sage-grouse. Available at: [http://www.fws.gov/mountain-prairie/pressrel/2013/09182013\\_gunnisonSageGrouse.php](http://www.fws.gov/mountain-prairie/pressrel/2013/09182013_gunnisonSageGrouse.php). Accessed October 31, 2013.
- National Environmental Policy Act of 1969, as amended. Available at: [http://ceq.hss.doe.gov/laws\\_and\\_executive\\_orders/the\\_nepa\\_statute.html](http://ceq.hss.doe.gov/laws_and_executive_orders/the_nepa_statute.html). March 19, 2014.
- Torell, L.A., N.R. Rimbey, J.A. Tanaka, D.T. Taylor, J.P. Ritten, and T.K. Foulke. 2014. Ranch-level economic impacts of altering grazing policies on federal land to protect the greater sage-grouse. University of Wyoming, New Mexico State University, University of Idaho, and the Western Rural Development Center. University of Wyoming Extension Bulletin B-1258. Available online at <http://www.wyomingextension.org/publications/>.



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