ANALYSIS OF IMPACTS OF PUBLIC LAND GRAZING ON THE ELKO COUNTY ECONOMY: PART VI: EXECUTIVE SUMMARY
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PHOTO FROM ELKO FIELD OFFICE OF THE BUREAU OF LAND MANAGEMENT

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Executive Summary

The following is an executive summary of four reports on the Elko County economy, the role of ranching in Elko County and impacts to ranch production due to changes in availability of public grazing land. These reports are:

1. Socio-economic Data and Trends for Elko County
2. Economic Impacts of Federal Grazing in Elko County
4. An Economic Description of the Agriculture Sector and Range Livestock Sector in Elko County

They are available on the University Center for Economic Development website at http://www.ag.unr.edu/uced/reports/technicalreports/Default.asp?year=2006. Hard copies may also be requested from:

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Introduction

Leased Bureau of Land Management (BLM) and United States Forest Service (USFS) land is an integral part of cattle production in Elko County, Nevada. Because of the multiple use character of Federal BLM and USFS lands, reduction of availability of federal grazing is often under consideration. Reducing access to available animal unit months (AUMs) of grazing will increase costs and reduce profits of cattle production in Elko County. This report gives a broad overview of the economy of Elko County and the role that cattle production plays in it. It then quantifies these losses to ranchers and the county economy. This report does not attempt to quantify benefits or losses from any potential increases or decreases in wildlife, tourism or lifestyle use under different grazing regimes, although these values are likely to be important.
Socio-economic Data and Trends for Elko County

- According to the state demographer, the population of Elko County in 2005 was 47,586.

- From 1970 to 2005, the average annual growth rate of Elko County population has been 3.57 percent. Growth has not been steady, however, and in some years Elko County has lost population.

- Median age for Elko County in 2000 was younger at 31.2 years of age compared to median age in the state of Nevada and the U.S. of 35.0 and 35.3 years of age, respectively.

- Per capita income for Elko County in 2004 was $28,385, which was 15.99 percent less than the state’s average of $33,787 and 14.11 percent less than the national average of $33,050.

- Covered employment in Elko County declined from 19,789 in 2000 to 18,942 in 2004. Fluctuations in mining sector activity remain an important factor in the Elko County economy.

- Elko County ranks second largest among Nevada’s seventeen counties with 10,990,186 acres.

- Approximately 72 percent of the Elko County acreage is administered by the federal government, with the Bureau of Land Management managing approximately 61.7 percent of total county acreage.

- From the 2000 Census, the total rural population in Elko County was estimated to be 21,375. Of the 21,375 in rural Elko County, only 555 persons live on farms.

Economic Impacts of Federal Grazing in Elko County and an Economic Description of the Agriculture Sector and Range Livestock Sector in Elko County

- In 2003, according to IMPLAN data estimates, the Cattle Ranching and Farming Sector in Elko County had 482 employees which were 2.5 percent of total Elko County employment. The Cattle Sector share of Elko County employment is compared to other major sectors of the economy in Figure 1.
Figure 1. Distribution of Elko County Employment for 14 Super-Sectors
In 2003, according to IMPLAN data estimates, the Cattle Ranching and Farming Sector in Elko County had $3,919,000 of labor income (employee compensation and proprietor income) which was 0.5 percent of total Elko County labor income. The Cattle Sector share of Elko County labor income is compared to other major sectors of the economy in Figure 2.

Figure 2. Distribution of Elko County Labor Income for 14 Super-Sectors

- Labor income and corporate profit in the Elko County Cattle sector may vary significantly from year to year depending on cattle prices, weather and other factors.

- During the period 1994 through 2004, average annual cash receipts and other income for the agriculture sector were $58.5 million, according to Bureau of Economic Analysis data. Production expenses for the period averaged $50 million. Net income was on average $8.6 million. Yearly production expenses remained fairly constant over the period. However cash receipts were variable. Realized net income to the agricultural sector in Elko County ranged from $25.1 million in 2001 to -$5.4 million in 1996.
**Sectoral Value of Exports and Imports**

- In 2003, according to IMPLAN data estimates, the Cattle Ranching and Farming Sector in Elko County had export sales of $43.5 million which was 5.77 percent of total Elko County exports. The Cattle Sector share of Elko County exports is compared to other major sectors of the economy in Figure 3.

**Figure 3. Distribution of Elko County Value of Exports for 14 Super-Sectors**

![Pie chart showing the share of Elko County exports by sector.]

- In 2003, the Cattle Ranching and Farming Sector in Elko County imported $20.5 million in imports which was 5.12 percent of total county industry imports.

- In 2003, the Elko County economy realized $176 million more in imports than exports. However, the Cattle Ranching and Farming Sector had $23.0 million more in exports than imports. The Cattle Ranching and Farming Sector in Elko County has been a positive sectoral contributor to the balance of trade in Elko County.
Sectoral Location Quotients

- Location quotients measure the degree of concentration of Elko County economic sectors.
- A location quotient greater than 1.25 indicates an exporting sector or a sector that is part of Elko County’s economic base.
- The location quotient value of 5.75 signifies that the Cattle Ranching and Farming Sector is a major contributor to the economic base of Elko County.

Inter-industry Analysis

- Export sales bring dollars to the county economy which provides for future economic growth.
- Changes in economic activity by the Cattle Ranching and Farming Sector will impact the economic activity of the Elko County economy.
- A measure of the economic effects of the changes in the Elko County economy from changes in economic activity by the Cattle Ranching and Farming Sector is called the multiplier effect.
- To derive these multiplier effects and county level sectoral output, employment, and labor income levels, the U.S. Forest Service input-output model IMPLAN was used.
- Given the economic inter-linkage and multiplier effect, total output impacts to the Elko County economy from activities by the Cattle Ranching and Farming Sector was $96.6 million. Total employment and labor income impacts in the Elko County economy from activity of the Cattle Ranching and Farming Sector was 905 jobs and $14.4 million in labor income.
- Given the economic linkages of the Cattle Ranching and Farming Sector, any changes in production levels by the Cattle Ranching and Farming Sector due to drought, rangeland fires, or public land management policies greatly impacts the Elko County economy.

Historic Trends in Livestock Production in Elko County

- According to estimates from the National Agricultural Statistics Service (NASS), beef cattle inventory for Elko County in 2006 was estimated to be 152,000 head.
- Beef cattle inventories have fluctuated over the past 30 years but have displayed an overall downward trend.
• As demonstrated by the second trend-line in Figure 4, post-1991 inventory levels appear to have stabilized. This pattern is reflective of U.S. inventory levels over the same time period.

Figure 4. Elko County Beef Cattle Inventory with Trend Lines, 1975-2006

![Elko County Beef Cattle Inventory](image)

• Sheep and lamb inventory for Elko County in 2006 was estimated to be 19,700 head. However, sales of cattle made up more than 95% of livestock receipts to Elko County according to 2002 Census of Agriculture data.

• According to NASS estimates, Elko County real net farm proprietor’s income totaled $11.5 million and incorporated farm income was $18.3 million in 2004.

• Elko County average ranch size has decreased from 8,745 acres in 1987 to 6,227 in 2002.

• Operator characteristics data may indicate an increase in so-called lifestyle ranches, whether by choice or by default.

Livestock Economics

• A linear programming model that simulates a representative Elko County ranch operation was used to examine potential impacts to Elko County ranches due to changes in federal grazing land availability at the ranch level.
• Average annual net cash income for the representative ranch under current conditions was $53,442. With a 25%, 50%, 75% and 100% reduction in federal AUM availability, average annual net cash income decreased to $46,134, $35,560, $8,703 and -$80,757 respectively.

• As shown in Figure 5, the probability of an annual loss in a given year for the Elko County representative ranch was from 19 to 22% if BLM AUM reductions were from 0% to 50%. Likelihood of a loss increased to 30% at a 75% reduction and 64% in the case that no federal grazing is available.

• As shown in Figure 5, the probability of bankruptcy for the Elko County representative ranch was less than 1% if federal AUM reductions were 50% or less. Likelihood of bankruptcy increased to 12% at a 75% reduction and 96% in the case that no federal grazing is available.

Figure 5. Probability of Bankruptcy and Probability of Annual Loss for Representative Elko County Ranch Under Selected BLM AUM Reductions

• The variability of ranch profits increased as reductions in federal AUM availability increased.

• In 1997 in Elko County, 177 ranches or 68% of operations with beef cow inventories held federal grazing permits. Of these ranches, 144 held grazing permits with the BLM, 61 held grazing permits with the USFS and 16 held permits with other types of land owners. Note that some owners had grazing permits with more than one type of agency.

• There were an estimated 847,000 permitted AUMs in Elko County in 2006. Approximately 85% of these were BLM allotments with almost all the remaining allotments on the Humboldt-Toiyabe National Forest.
• Using a cattle budget for Elko County, the ranch level analysis and inter-industry analysis multipliers it was estimated that for every 1,530 AUMs available for cattle production in Elko County, one job was generated. Earnings per job generated by cattle production were estimated to be an average of $20,700 per year.

• The 847,000 Federal grazing permits in Elko County could generate $11.4 million in labor earnings and 553 jobs.

• In certain circumstances, one AUM of federal grazing land may be more valuable than an average AUM in production of cattle. From a ranch viability perspective, one AUM of federal grazing land in Elko County could be associated with as much as $84 in value of cattle production.

• From the ranch viability perspective total economic impacts from one AUM of federal grazing are associated with as much as $30 of labor earnings and 0.0014 jobs. This implies one job per 714 AUMs of federal grazing.

Fiscal Structures and Trends for Elko County Government

• In FY2005, Elko County Government was highly dependent upon three revenue sources which were Consolidated Tax Revenue, Property Taxes, and Transfers In. These three sources accounted for 80% of total Elko County Government revenues.

• Between FY1995 and FY2005, the proportionate share of total Elko County Government revenues from property taxes increased from 17.1% to 23.7%.

• The value of production of cattle that graze on public lands are capitalized into private acreage. If public land grazing is reduced, this may cause a reduction in property taxes revenues because the value of cattle production has declined.